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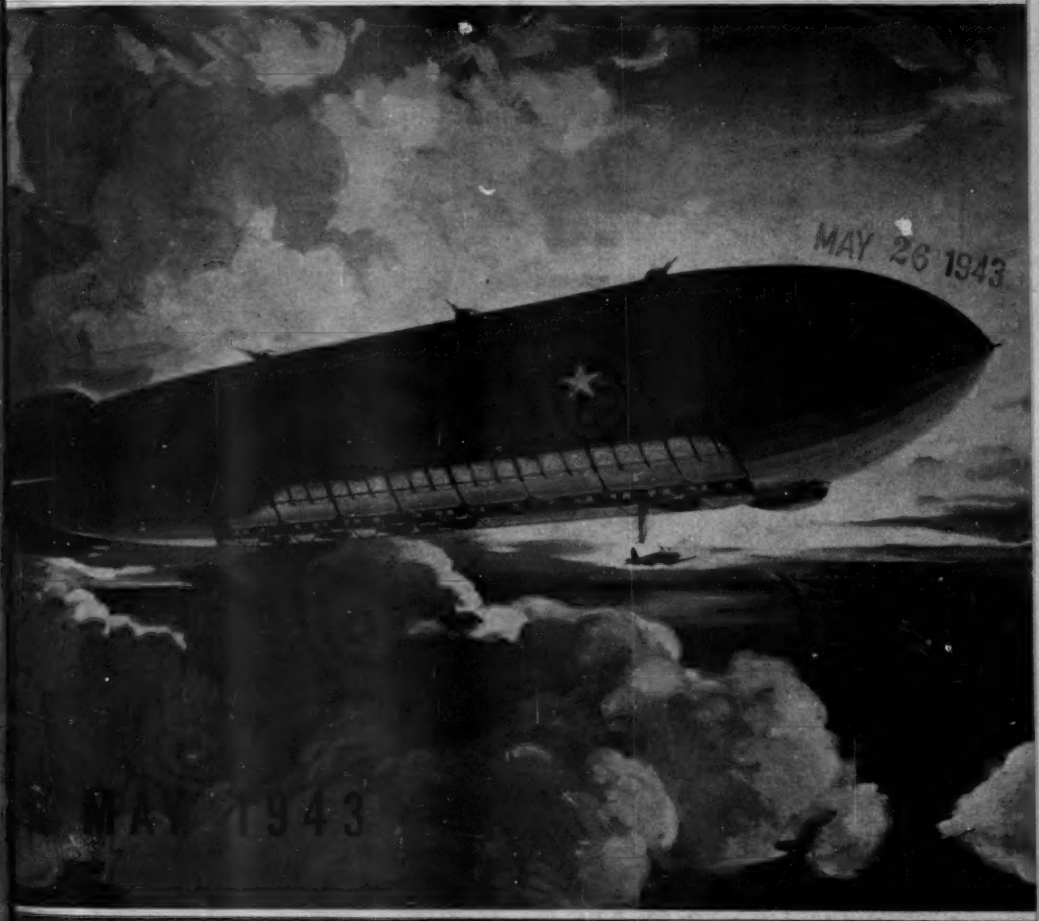

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VOL. 2 No. 5

America's Aviation Tomorrow
By COLONEL EDGAR S. GORRELL, *President, Air Transport Association of America* 5

Air Mail Celebrates Its Silver Jubilee
Washington Observance Recalls Precarious First Flight in '18 14

In Wartime, What About Imports by Air?
By LIEUT. (J.G.) LANGDON P. MARVIN JR., *Chairman, Interdepartmental Air Cargo Priorities Committee, War Production Board* 18

Common Sense, Not Globaloney, Needed in Air
By L. WELCH POGUE, *Chairman, Civil Aeronautics Board* 22

When Air Cargo's Ship Comes In, It Could Be Lighter-than-Air
By P. W. LITCHFIELD, *Chairman of the Board, Goodyear Tire & Rubber Company* 29

Air Cargo Personalities: Jack Frye 40

All First Class Mail To Fly, New Bill Urges
Oklahoma's Congressman LYLE H. BOREN *Sees Logical Answer to Postwar Problems* 42

Air Commerce: Air Cargo Doubled in 1942, Statistics Show 46

DEPARTMENTS

Air Cargo Personalities 40
Air Commerce—Statistics 46
Air-Portation News 50
Air Shipping: International Express and Mail Tables 58
Congratulations from A.T. 48
Editorial 62

AIR TRANSPORTATION'S COVER

Artist's conception for Goodyear Aircraft Corp. shows how airships might be used as flying aircraft carriers in war. As P. W. Litchfield, Goodyear board chairman, points out in his article on page 29, the same device could be a potent aid to peacetime air transportation. "America," Litchfield has repeatedly warned, "Must Be First In The Air. Unless and until America is the most powerful nation in the air, our safety, our freedom and our standard of living will not again be what they have been in the past."

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BEECHCRAFTS ARE DOING THEIR PART

America's Aviation Tomorrow

It Is A Huge One, But Airlines Must Be Made Able To Do Their Part

IT IS A SPECIAL privilege for AIR TRANSPORTATION to present this address by one of aviation's top notables, Colonel Edgar Staley Gorrell, almost simultaneously with its delivery to the Foreign Commerce Club of New York at Hotel Astor, New York City, on May 19. A West Point and M. I. T. graducte, Colonel Gorrell was flying with the U. S. Army as early as 1914, served on the Bolling Mission named by President Wilson to determine Allied air materiel needs in 1917, and was later chief of staff of the Air Service, having served on five fronts in World War I. A longtime automotive executive, he headed Stutz Motor Car Co. from 1929 to 1935. In 1936 he assumed the post he has since held with such distinction, at the head of the Air Transport Association of America.

By COLONEL EDGAR S. GORRELL, *President*
Air Transport Association of America

IN 1784 George Washington wrote to one of his friends in France commenting upon the balloon ascensions which were then the rage in Paris. He said that the tales of these ascensions "lead us to expect that our friends at Paris, in a little time, will come flying thro' the air, instead of plowing the ocean to get to America."[1] In the same year Thomas Jefferson listed the probable uses which the discovery of balloons might have in the future and, first among these uses, he placed "transportation of commodities under some circumstances."[2] Likewise in the same year Benjamin Franklin wrote: "Five thousand balloons, capable of raising two men each, could not cost more than five ships of the line; and where is the prince who can afford so to cover his country with troops for its defence as that ten thousand men descending from the clouds might not in many places do an infinite deal of mischief before a force could be brought together to repel them?"[3]

These early observations bear witness to the fact that the development of aviation has been eagerly anticipated in America throughout our national life. Indeed, the first letter carried by air anywhere in the world was directed to Benjamin Franklin, transported in a balloon which crossed the English Channel in 1783 with an American as one of its occupants.[4] And mail was carried by air in this country for the first time over a hundred years ago, in 1835.[5] As a matter of fact in the 1860's a company was actually organized to conduct a regular air transportation business between Philadelphia and New York.[6]

[1] Quoted in *Milbank, The first Century of Flying in America*, page 8, from the original letter now in the Library of Congress.
[2] Quoted in Milbank, op. cit., page 9.
[3] Van Doren, Benjamin Franklin, page 702.
[4] Van Doren, op. cit., page 702.
[5] Milbank, op. cit., page 58.
[6] Milbank, op. cit., page 86.

Now, after many years of alternate discouragement and revival of hope, those who have dreamed so ardently of realizing the ultimate destiny of aviation as an established and commonly accepted means of transportation are about to see their dreams come true. Experience during the quarter century since the inauguration of air mail service by our Post Office Department on May 15, 1918 has offered convincing evidence that air transportation is here to stay and must be vigorously developed. Yet, both in government and in private life, those who have had a clear appreciation of the compelling need to develop America's aviation swiftly and extensively have been relatively few in number until the very recent past. But today that appreciation is shared by everyone—by millions of boys in our armed forces who witness daily demonstrations of the miracles which aviation can perform, and by millons more of their families who are anxiously awaiting their safe return. And with this generally shared appreciation, the only question is one of ways and means.

Excerpt from Address by President Roosevelt to the National Aviation Forum on Jan. 24, 1939:

" . . . the country's welfare in time of peace and its safety in time of war rests upon the existence of a stabilized aircraft production — an economically and technically sound air transportation system, both domestic and overseas— . . . "

Tonight I want to discuss briefly certain phases of the ways and means for securing the soundest and swiftest development of America's aviation tomorrow.

Our first assumption must be, of course, that the United Nations will gain the victory and gain it in an effort united to the end which will promise real hope for comradely cooperation among those nations in the years to come. But in making that assumption we would be foolish to believe that we can safely divert our attention and our energies for one moment from the task which must remain first and foremost—the task of winning the victory. We would be equally foolish were we to believe that cooperation among nations is to be had for the asking; it can come only if we are willing to cooperate, ready to give as well as to receive.

Aviation No Longer New

IN considering the ways and means for American aviation's best development the first thing we should do is sedulously to avoid making the mistake that aviation is something utterly new and mysterious.

During the last few months of wide-spread and somewhat excited interest in the possibilities of aviation there has been a tendency to regard aviation as wholly novel and somewhat mystical. Indeed, in recent discussion there has been a great deal of mumbo-jumbo about aviation which may have clouded rather than clarified our national thinking. Particularly among some of those whose acquaintance with the possibilities of aviation is relatively recent, one sometimes detects an unquestioning acceptance of the proposition that everything about aviation is new and unique, and that the ways and means for its development must be equally so. It is only human nature, I presume, to feel that some unfamiliar problem requires some new method of solution. It is much easier to sit down in remote precincts and, on a blank piece of paper, to draw up some fanciful arrangement than it is to deal with the hard realities of experience and to build upon the past.

There have repeatedly appeared during recent months newspaper accounts indicating that projects for various degrees of government ownership, management or operation of American aviation after the war are under consideration. These projects apparently encompass everything from such extreme proposals as an inter-governmental world corporation to less fantastic suggestions for what Mr. Lissitzyn terms "statization". To what extent such proposals have been receiving consideration by the Interdepartmental Committee on International Aviation one cannot tell. That committee has only recently emerged from behind closed doors, and then only to the extent of having the Civil Aeronautics Board circulate a list of questions with the statement that onyone interested should send his comments to the board. Certain of those questions do, however, reflect apparent suggestions for internationally owned and controlled government corporations and for other types of governmental ownership or management in the case of foreign air commerce.

There is no reason for not giving consideration to all possible means for aviation's best development, including government ownership, management or operation in the field not only of foreign commerce but also of domestic

commerce. Aviation is too important to the future welfare of America to foreclose from serious consideration any possible means for its best development, and unquestionably there is a certain apparent simplicity about governmental ownership, or management, or operation, which must have a strong appeal, especially to those who have only recently become acquainted with the many serious and difficult problems which the development of aviation presents.

Must Trust Experience

BUT let us hope that responsible persons both in and out of government will not fall victim to the human tendency to which I have referred, and will not too readily assume that because the problems of aviation may seem to them new and in many respects unique, it is necessary to seize upon some entirely new and untried instrument for aviation's best development. And by all means let us hope that those who will be responsible for many of the fundamental decisions which may irrevocably affect aviation's future will not overlook the experience gained in the 25 years since the Post Office Department first speeded the mail aloft from Washington's polo field, and will not forget that a great fund of knowledge is stored in the minds of men and of companies, long active in every field of aviation, who have met and surmounted difficulties in the past far more severe than problems yet to be encountered.

Direct governmental intervention in the ownership, management and operation of air transport enterprise has been familiar in European countries, yet, as we all know, the progress of America's aviation in both domestic and foreign commerce has led the world. It has been estimated that in 1938, the last prewar year, the total number of aircraft of all the European companies, aside from Russia, was less than 900.[1] In the same year scheduled American flag airlines, exclusive of the lines in Alaska, had approximately 350 aircraft,[2] and the carriers in Alaska during that year operated an additional 155 airplanes.[3] And many of the aircraft of the European airlines were of American manufacture. Thus the showing of our nation, compared with the showing of all of the European airlines all over the world, was favorable, to say the least. And other indices of development such as numbers of passengers or passenger-miles transported, or volume of operation per fatality, would disclose a record even more favorable to American flag air transportation in the world picture. For instance, the very significant index of passenger-miles per route-mile operated showed a record for U. S. air carriers domestic and foreign, in 1938, four or more times better than that of the European companies. And to take our domestic carriers alone the showing was so much better that there can hardly be any comparison.[4]

I suggest such a comparison not in a spirit of boastfulness or Jingoism, or to detract from the admittedly great accomplishments of our brother aviation enterprises in Europe, but rather to remind that the means which our nation has adopted in the development of aviation did not prove wanting during those years when aviation enjoyed none of the advantages of wide-spread popular support and interest which now appear to have come to it. Those years, moreover, represented a period of sheer difficulty in the development of aviation which, relatively, will make the future seem halcyon days indeed.

Excerpt from President Roosevelt's Annual Address to Congress on the State of the Nation, Jan. 6, 1942:

"Only this all-out scale of production will hasten the ultimate all-out victory. Speed will count. Lost ground can always be regained—lost time never. Speed will save lives; speed will save this Nation which is in peril; speed will save our freedom and civilization—and slowness has never been an American characteristic."

Private Initiative Vital

THIS is not to say, however, that aviation has reached a stage of stability no longer requiring the sparkle and ingenuity of private initiative. Quite the contrary is true. What has been accomplished in the past is the solution only of certain basic technical problems and the development of certain basic techniques of operation. There lie ahead not only further technological improvement but also

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[1] Lissitzyn, *International Air Transport and National Policy*, page 68.

[2] *Civil Aeronautics Authority, Second Annual Report* (1940) page 50.

[3] *Governor of Alaska, Annual Report* (1938) page 38.

[4] National Resources Planning Board, *Transportation and National Policy*, page 352.

the great task of commercial development, the task in which American private initiative is peculiarly fitted to excel.

Ahead of us lie such problems as that of devising new methods of packaging cargo which promise to provide huge savings in time and in cost, and to effect profound changes in the habits of shippers. Ahead of us lie such problems as that of modifying the needs of business men with respect to the maintenance of inventory, which will be greatly affected by the speed of air transportation. Ahead of us lie such problems as that of creating new distribution centers in the domestic and international flow of cargo traffic. Ahead of us lie such problems as that of formulating improved cargo rate structures, tailor-made to the needs of shippers and avoiding some of the past mistakes in other fields. Ahead of us lie such problems as that of working out new methods of solicitation for, and servicing of, cargo traffic, applying the many lessons we have learned in the solicitation of passenger traffic and combining the best features of experience in other modes of transportation. For tasks such as these there is hardly any question but that private initiative is best fitted.

The Honorable Sumner Welles recently made a statement which I am sure reflects the unanimous judgment of our people. He said:

". . . I believe that here in our own country we will continue to find the best expression for our own and the general good under a system which will give the greatest incentive and opportunity for individual enterprise. It is in such an environment that our citizens have made this country strong and great. Given sound national policies directed toward the benefit of the majority, and not of the minority, and real security and equality of opportunity for all, reliance on the ingenuity, initiative and enterprise of our citizens rather than on any form of bureaucratic management, will in the future best assure the liberties and promote the material welfare of our people."[1]

Our private air transport organizations, built up through so many years of hard experience, are functioning today more effectively than ever before. The impression apparently went abroad about a year ago that the airlines were being virtually taken over by the Goverenment. This was not the case then, it is not true now, nor is there any prospect that the demands of the war will require any such move in the future. On the contrary it has been the deliberate effort of the Government—and that includes the Army—to avoid any such step.

The fact is that the private airline organizations today are larger than ever before. Despite necessary curtailment of airplanes in regular common carrier operations, a great variety of additional transport and related services have been undertaken by the airlines at the Government's request and are being discharged by them, here and abroad, with the dispatch and efficiency which the nation has come to accept as a matter of course from the airlines. Those same airline organizations will be ready on the instant to carry out with equal dispatch and efficiency the responsibilities of peacetime commerce when this bitter war has been won.

Excerpt from joint letter dated Sept. 13, 1940, from the Secretaries of War and Navy to the Secretary of Commerce, jointly stating the official Army and Navy policy with respect to the relation of the armed forces to the Air Transport Industry:

"The War and Navy Departments consider that the Air Transport Industry is a necessary adjunct to the national defense . . . it is both necessary and practicable to allocate available aviation personnel and materiel in such a manner as to insure the maintenance of airline service without reduction in its safety and reliability."

On Aug. 9, 1940, Secretary of War Stimson said to Congress:

"Air power today has decided the fate of nations."

Federal Regulation Sound

I TURN now to another question, bearing on the means for aviation's best development, which is presently before the Congress. In the Lea-Bailey Bill, pending in both House and Senate, it is proposed that Federal regu-

[1] From address of the Undersecretary of State at the Arlington Memorial Amphitheatre on Memorial Day, 1942.

lation be extended to all air commerce whether between points within a single state or between points in different states. Few steps to assure the sound development of aviation are as essential as this. The reason is to be found in the special characteristics of air commerce. The speed of an airplane, even were it to move no faster than surface vehicles, would be much greater than the speed of surface transportation because it is able to move directly to its destination unimpeded by surface barriers. And bear in mind that even the prewar airplane moved at a rate of five or six times faster than ordinary surface transportation.

Excerpt from a letter dated April 1, 1942, from the Secretary of War to the Commanding General, Army Air Forces:

"Civil air transportation is of vital importance to the war effort . . . Key airline personnel should be encouraged to stay at their posts. . . . "

The speed of the postwar airplane will be vastly accelerated. Aircraft in actual use today, developed in notable instances as a result of planning done by the airlines and by the airlines and the War Department jointly prior to the war, make many of the prewar airplanes seem primitive. Indeed, we are in the midst of a tremendous technological development the full impact of which upon commercial plane design will not be felt until the aircraft factories are retooled after the war is over. Every type of airplane, small as well as large, will be vitally affected, and the whole aviation industry will have to adjust to speeds far in excess of the prewar rates.

Constitutional lawyers have long speculated concerning the possibility that the air space has never been subject to the jurisdiction of the several individual states. It is suggested that, since new domain can be acquired only through actual use and possession, the domain of the air overlying the individual states was not subject to their sovereignty when they entered the Union. Consequently, when the air space became utilized through aviation, full jurisdiction was vested in the Federal Government, just as would be true were we to discover new territory.[1]

However the constitutional theorist may speculate, there is no question but that the practical necessities of aviation's best development require regulation by a single jurisdiction exclusively—and in our system that can be accomplished only through complete Federal regulation. It is inconceivable that the air space of our nation should be divided into 48 parts for the purpose of regulation, with the regulations of a 49th jurisdiction added on top of the 48 others. In the case of surface transportation there are doubtless good and sufficient reasons, both of history and of economics, for a system of this nature; but in the case of air transportation, such a system would amount to a Balkanization which could redound to the benefit only of those whose interest is best served by impeding aviation's development.

National Outlook Must Rule

EVEN during the earliest days of governmental control of aviation by the Post Office Department the need for a coordinated system of air commerce on a nationwide basis was felt to be uppermost. The result was that, whereas rail and motor commerce originally developed locally, and for many years without any necessary regard for system coordination, air commerce was developed from the very first with a view to linking every point within the nation, so far as possible, with every other point. And in that spirit the airlines have arranged their schedules, worked out their rate structures, and generally conducted their business.

But it would be impossible so to conduct air commerce were there to be multifarious regulations by the individual states dealing with such matters as rates, securities issues, accounting practices, scheduling, and the technical requirements and qualifications applicable to pilots and planes. Not only would such a system of multi-regulation gravely impair the efficiency and resources of the industry, but it would make virtually impossible the rapid mobilization of the industry for any purpose, at any point, at any time, in the national defense such as it is now capable of accomplishing.

In the letter of Secretary of War Henry L. Stimson, to the chairman of the Military Affairs Committees of the House of Representatives and the Senate:

"Continued uninterrupted service by domestic air lines is essential in the interest of national security."

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[1] See *Legislative History of the Air Commerce Act of 1826*, printed for use of Committee on Interstate and Foreign Commerce, House of Representa- pages 221 et. seq.

It is the sober fact that under such multi-regulation, many things done for our country's defense in the field of transportation by air since Pearl Harbor either would have been impossible or would have been possible only at the dangerous cost of time-consuming arrangements with many state and local government bureaus coupled with deliberately winking at legal requirements. We are able to appraise the likely barriers to the use of air commerce in the national defense which would arise from individual state regulation because of the experiences during the past year and a half in other fields, especially in the motor carrier field. In such fields there is undoubtedly real need for state regulation which justifies such cost as there may be in loss of efficiency in certain instances. But no such need exists in the case of air commerce. On the contrary, as the Committee on Aeronautical Law of the American Bar Assn. has forcefully pointed out, the regulation of air commerce can be accomplished properly only through exclusive Federal action.[1]

Excerpt from letter dated Nov. 6, 1942, from General George C. Marshall, Chief of Staff, United States Army, to the President of the Air Transport Assoc. of America:

" . . . this job . . . is essential to our business of getting on with the war."

Factories Must Keep Busy

THERE is another problem in connection with aviation's development for the future, in the interest both of commerce and of the national defense, which is basic. That is the assuring of a strong aircraft manufacturing industry. If we leaf back through the pages of history to the postwar years of the early 20's we will be struck by the fact that our country, for a time, lagged danagerously behind other nations of the world. Our aircraft manufacturing industry during the First World War had a record which, relatively speaking, was fully brilliant as its record during the present conflict. In November 1918, the rate of aircraft production in our factories exceeded 23,000 a year. In fact, our industry during its 19 months of war produced aircraft which exceeded by more than 50 per cent England's production during its first 31 months of war.[2]

Yet in the immediate postwar years our aircraft manufacturing industry was virtually forgotten. To an alarming extent, the experience and the resources which it had acquired during the war were dissipated almost at once. Had it not been for the courage, the will, and the fighting hearts of a few brave men among our aircraft manufacturers, some of whom, happily, are still with us, reaping the honors which are their due, it may be doubted whether America today would be bringing to bear upon the most dangerous enemy in history the most effective air bombardment which man has yet conceived.

One among other reasons that the manufacturing industry suffered so seriously after the last war was the failure to assure a reasonably immediate demand for those products. It was many years before the second-hand and converted military airplane had ceased to occupy a dominant place in America's peacetime skies.

After this war is over the manufacturing industry will face the same danger which nearly destroyed it after the last war. It is imperative that steps be taken to assure that history will not repeat itself.

The order of the Secretary of War, signed by General George C. Marshall, Chief of Staff, War Department Circular No. 211, dated July 1, 1942, directs:

"In the performance of its mission, both within and without the continental United States, the Army Air Forces will utilize to the fullest extent possible, the services, facilities and personnel of the civil air carriers."

New Planes A 'Must'

IT is probable that many types of military aircraft could be converted to inefficient commercial usage. It is even probable that in certain regions of the world such converted craft might be operated for certain purposes reasonably well. But despite the appearance of immediate saving in initial cost, *the attempt to utilize converted military aircraft on any appreciable scale in this country or on our principal world trade routes would be a gross mistake*—a mistake not only from the standpoint of the essential interest of the nation in a sound aircraft manufacturing industry, but

[1] See 66 *Reports of American Bar Association*, pages 221 et seq.

[2] Gorrell, *The Measure of America's World War Aeronautical Effort* (Norwich University, James Jackson Cabot Lecture No. 6), page 34.

also from the standpoint of efficiency of transport operations and long-run economy.

So far as bombers are concerned, we all know that they are built for a specific combat purpose and are ill suited to the needs of commerce. So far as military transport planes are concerned, we all know that many, if not all, of them will be obsolete in a very short time, and in any case will not be best suited for the kind of job which our air commerce should prepare itself to undertake at the earliest possible moment. It would therefore be a major tragedy were our nation to pursue a pennywise policy of planning for the obsorption of military aircraft in our peacetime commercial system. What we must do is to plan for complete new equipment throughout our system of air commerce so far as possible.

At his press conference on Jan. 8, 1942, Joseph B. Eastman, Director of Defense Transportation, stated:

"Efficient transportation is just as important to the war effort as the furnishing of machine tools."

In the fall of 1940 the airline industry announced that between that time and the middle of 1942 it would need 500 new aircraft. It is amusing now to recall with what skepticism this announcement was met in many circles. One was left with the impression that the industry in this announcement was suffering from the effects of a pipedream.

Today no one would question but that, had other needs not intervened, more than that number of new aircraft could have been supplied to the industry with benefit to all concerned.

The industry has not been able yet even to hazard a guess as to its likely equipment requirements during the immediate postwar years. It is certain, however, that the figure of 500 new aircraft which we were discussing in the latter part of 1940 will seem insignificant against the numbers of new aircraft which should be absorbed in our commercial systems after the war is over. A recent study made for the National Resources Planning Board estimates an increase in the traffic of the domestic airlines during the postwar years exceeding by more than 1200 per cent the traffic of those lines in 1940.[1] This estimate undoubtedly errs on the conservative side. Even, however, with this conservative estimate, coupled with the great development in American flag air transportation in foreign and territorial commerce, and the substantial demand for aircraft which can be encouraged in the field of private and miscellaneous flying, it is evident that a potential demand is available among American sources alone which, with proper planning, can assure the maintenance of a sturdy manufacturing industry.

Factories' Stake Vital

IN this connection it is especially satisfying to observe that the Lea-Bailey Bill, to which I have already referred, contains a provision for the substantial encouragement and promotion of private and miscellaneous flying which represents a new and important departure in our Federal legislation. The bill, moreover, contains further provisions respecting contract carriers by air which, wisely administered, could go far to avoid undue resort to second-hand military aircraft, rather than new equipment, in the contract carrier field.

So far as our airlines in domestic and foreign commerce are concerned, it is to be earnestly hoped that they will come out of this war with sufficient financial resources readily available so that they can immediately—literally without a day's delay—begin giving the manufacturers necessary large scale orders which will be so important to a proper transition from a wartime to a peace time economy for the manufacturing industry. There has been some question from time to time in the

Lewis B. Hershey, Director, Selective Service System, Jan. 26, 1942:

"Air transportation is a vital and necessary adjunct to our Defense and War effort. Almost daily the military services are calling upon the airlines to perform special missions in connection with the urgent and expedited transportation of personnel (including the transportation of troops and their equipment) and materiel necessary to our War effort . . . The airlines are increasingly being called upon to perform vital maintenance, airplane assembly, weather forecast and communication . . . Delay of above services will impede the War Production Program, and in that sense will endanger the National safety."

[1] *National Resources Planning Board, Transportation and National Policy,* page 354.

past whether the policies adopted by the Civil Aeronautics Board would make it possible for the airlines to provide such orders to the manufacturers promptly and on sufficient scale. I do not have the time to discuss here the role of the Board in this matter, or to appraise the adequacy of its past policies. However, as I am sure the Board itself fully appreciates, its role in this respect is of critical importance and, in connection with the determination of matters such as depreciation policies, it is in the Board's power either greatly to facilitate or seriously to cripple the important contributions which the airlines can make to the maintenance of a proper aircraft manufacturing industry.

Excerpts from the *Congressional Record* of Jan. 25, 1943, speech of Carl Vinson, Congressman from Georgia:

"Aviation, we all know, has advanced by leaps and bounds. It will continue to grow. After the war it may become the chief common carrier within and to points without our borders. . . .

"The Congress has established in recent years a Civil Aeronautics Administration and a civil Aeronautics Board. That legislation originated in the Committee on Interstate and Foreign Commerce—not a special committee on civil aviation, and for it the country should be profoundly grateful to that committee's great chairman, the gentleman from California (Mr. Lea), and to his committee colleagues, for their wisdom and foresight. Its value in this war situation has proved to be immeasurable. . . .

"The civilian pilot training program, the development of landing areas, the installation of air navigation facilities and the development thereof, including communications and directional guidance, and the accomplishments of the Civil Aeronautics Board, have all been of the greatest value to the country in the prosecution of the war, and every phase of the work of these agencies today is performed under the closest kind of cooperation with our military and naval air arms. In time of war, in fact, they may be said to be adjuncts of our defense arms, like the Coast Guard, for example, is of the Navy. They are part and parcel of the defense establishments."

CAB Faces Big Test

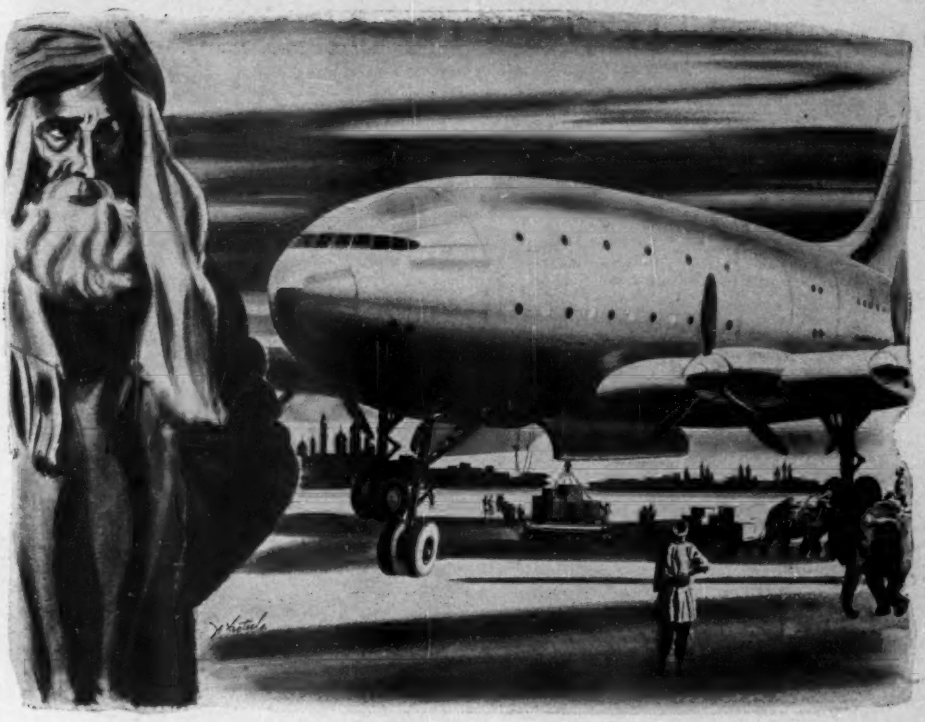
ANOTHER essential means to the best development of America's aviation is, indeed, the Civil Aeronautics Board. We who have watched the Board's work most closely during its nearly five years' life have been deeply impressed by the ability and by the sincerity of purpose of its members and of its staff. The war has resulted, of course, in serious inroads upon its staff at the very time when its responsibility should be even further increased. The immediate postwar years, which will thrust upon the Board still greater responsibilities will tax its capacities no less than will the industry itself be taxed by its problems. Indeed the supreme test of the Civil Aeronautics Board lies ahead. We in the aviation industry are confident that it will meet the test.

But if the Board is to carry out its role, it is most urgent that the policy adopted by Congress in the Civil Aeronautics Act of centralizing in the Board responsibility respecting aviation policy should be strictly adhered to, both in letter and in spirit. Throughout Congressional consideration of the Civil Aeronautics Act it was emphasized in both houses of Congress that the policy of dividing responsibility for civil aviation among several different Government agencies, which had theretofore been followed, should be finally terminated.

With the inevitable growth of government regulation, nothing is more vexing, harassing and crippling to private industry than to be faced with divided jurisdiction among divers commissions, boards and bureaus of Government. The policy adopted by Congress in the Civil Aeronautics Act is absolutely essential to aviation's best interest. Yet in recent months one has had the feeling in Washington that there may be a growing tendency which would result in the aviation industry's having to deal once again with divers agencies in order to secure solution of a single problem.

I do not mean to imply that there have been any suggestions for restricting the jurisdiction of the Civil Aeronautics Board; nor do I mean that other agencies of the Government have been making any deliberate effort to usurp the function of the Board. But as aviation and its problems, though no more varied than in the past, become more apparent to more people, there is a natural tendency for additional agencies of Government, oftentimes unthinkingly, to attempt to deal with matters which could be dealt with more properly and more satisfactorily by the Civil Aeronautics

(*Continued on Page* 54)



Look to Pan American when you look to AIR CARGO'S FUTURE

One of the best ways to "guess" the future is to KNOW *the past.*

For *over 15 years* Pan American has been providing overseas shippers with an unequalled Air Express service. In recent times that service expanded and grew into the freight class.

Even with its present, war-limited equipment, Pan American is today carrying ton upon ton of war-vital, transoceanic cargo monthly. (Exact figure cannot be published.)

Huge new cargo Clippers *may* come before Peace . . . will surely come shortly after it. Whenever that day *does* come, it will be natural for commercial shippers to turn to Pan American, which has the experience and which did the pioneering job fifteen years ago.

Pan American World Airways System

BUY WAR BONDS

Wings over the WORLD

PAN AMERICAN CLIPPERS

AIR MAIL CELEBRATES ITS SILVER JUBILEE

Washington Observance Recalls Precarious First Flight in '18

ON May 15, the nation observed the 25th anniversary of the establishment of regular air mail service in the U. S. That date a quarter of a century ago marked the advent of a new epoch in mail transportation.

The first regular air mail route was established between Washington and New York with a stop at Philadelphia. It proved to be the nucleus of a network of air mail lines which now cover not only our own country but the entire world.

There was a distinguished gathering of high officials assembled at the Polo Field in Potomac Park when the first plane carrying air mail took off for its destination in New York. Among them were President Woodrow Wilson and Mrs. Wilson, Postmaster General Albert Burleson, Assistant Secretary of the Navy Franklin Delano Roosevelt, Merritt O. Chance, Postmaster of Washington, D. C.

Lieut. George L. Boyle, U. S. Army Air Service, took off from Potomac Park at 1:46 p.m. on May 15, 1918, carrying two sacks of letters and packages in his plane. His start was successful but on his way to Philadelphia he became lost near Waldorf, Md., 25 miles from his starting point and in landing, broke his propeller blade. He was unable to summon another airplane to carry on his burden to Philadelphia, nor could he get a car to haul the sacks back to Washington in time to have an emergency plane transport them to Philadelphia. The mail which he had carried but 25 miles was later sent back to the capital. It was at first planned to send it along by train service but, since most of it was of a souvenir nature, it was held over in Washington and dispatched next day.

Although Lieut. Boyle did not reach Philadelphia the first day, Lieut. Paul Culver left that city with his mail plane at 2:20 o'clock and arrived at Belmont Park, New York, at 3:55. The mail he carried contained, among other letters, one to which the first airplane postage stamp, autographed by President Wilson and cancelled, was affixed—a letter from Postmaster General Burleson addressed to Postmaster T. H. Patten, of New York.

On the southbound journey, Lieut. T. H. Webb left Belmont Park at 11:30 a. m.,

arrived at Philadelphia at 1:00 p. m. Lieut. J. C. Edgerton then took charge of the plane, leaving Philadelphia at 1:06 p. m. and arriving at Washington at 2:50.

This first air mail route covered a distance of 218 miles and the frequency of service was one round trip daily from Washington to New York, except Sunday. The War Department furnished planes and pilots and conducted operations. The Post Office Department handled the mail. The War Department remained in the picture until Aug. 12, 1918, when the Post Office Department took over the operation.

But this new method of the transportation of the United States Mails was not put into effect until after many objections against it were overcome in Congress.

In stating his objections to the appropriation, one of the opposition Senators pointed out that he saw no reason, at the time, to justify the expenditure of one dollar for the purpose suggested. He stated that we had one of the best transportation systems in the world and that we were carrying mail from Washington to New York in four to six hours.

"What is the necessity for this scheme?" he asked. "Who is demanding it? Why dissipate our energies, squandering our monies at this time when all our resources ought to be devoted to the prosecution of the war?"

Senator Kenneth McKellar, of Tennessee, now Chairman of the Senate Committee on Post Offices and Post Roads, defended the appropriation and declared that when he was a young man it was considered that the telephone was a toy and that it had no real use or advantage. Later, the automobile was also considered a toy that would never be of any practical benefit.

"I hope the Senator will not interpose an objection to this very worthy measure," declared McKellar. "It may be that the money may not bring full results the first year, or the second year, or even the third year. But the time will come when results will be shown by reason of these expenditures. The time will come when we will use airplanes just as frequently as we now use automobiles, in my judgment, and there may be inventions in the future that will far surpass them. We cannot afford to take chances on it if we want to help develop things of this kind and make them the best for our country."

The motion to strike out the appropriation of $100,000 was defeated by only eight votes in the Senate.

Thus Senator McKellar's prediction on the possibilities of air mail service, made a quarter of a century ago, have been more than fulfilled. Contrasted with the single 218-mile Washington-to-New York air mail route of 25 years ago, air mail routes are now operating in every state of the union and to practically every country in the world, or were in operation prior to the outbreak of the Second World War.

Throughout the country today, people are being shown the amazing worldwide air supply arm of the military forces, and told that this war tool is the direct outgrowth of our air mail service. In many places during the celebration, they saw early mail planes alongside today's four-motored sky freighters; veteran mail pilots beside youngsters who are hopping oceans and continents.

With President Roosevelt as honorary chairman, the active committee in charge included Postmaster General Frank C. Walker, Secretary of Commerce Jesse Jones, Secretary of War Henry L. Stim-

WAITING FOR FIRST AIR MAIL are Mrs. Woodrow Wilson and the World War I President. Also present (right, indicated by arrow) is Wilson's Assistant Secretary of the Navy, Franklin Delano Roosevelt.

•

PIONEER PILOTS in air mail's first year included such stalwarts as (left to right) Edward L. Langley, Edward V. Gardener, B. B. Lipsner, superintendent of air mail; Maurice Newton, M. Miller, Robert Shonk.

son, and Secretary of the Navy Frank Knox. William A. M. Burden, special aviation assistant to the Secretary of Commerce, and Charles I. Stanton, CA Administrator, directed the observance.

Four of the aerial workhorses used by the Air Transport Command and a Naval Air Transport freighter were on display at Washington's National Airport. There was a demonstration of Air Mail Pickup service, of the glider towing and launching, of the new helicopter; of philatelic items valued at thousands of dollars, of V-Mail, and a cavalcade of mail planes to give a graphic story of development.

Air mail was picked up on the Mall near the Washington Postoffice and flown to the airport in the autogiro in which Eastern Air Lines once conducted a similar service at Philadelphia.

There were two coast-to-coast broadcasts, one at a dinner in Washington, presented by the National Aeronautic Assn. the other from the Sunday ceremony at the airport.

Stamp and cover collectors, prevented by the war from enjoying special cachets and special stamps, may have a souvenir of the occasion by buying War Bonds at any airline ticket office. The bonds they buy will be mailed from the Air Transport Assn.'s office in Washington in a special envelope, under a plan worked out with the Treasury Department by J. W. Hutchinson, chairman of the airlines' committee on the observance.

***FIRST MAIL FLIERS** were Lieut. George L. Boyle, Maj. R. H. Fleet, later head of Consolidated Aircraft Corp., shown just before their take-off from Washington's Potomac Park.*

***THESE ARE TRANSPORT PLANES**, little as they resemble the great passenger-and-cargo liners of World War II. First flown in the mail service by the U. S. Army, they hauled a few sacks each.*

In Wartime, What About Imports by Air?

Unofficial But Informed View Prepared by WPB's Air Priorities Chief

AIR TRANSPORTATION is fortunate in being able to present this analysis of IMPORTS BY AIR by Lieutenant Marvin. Though it has been reviewed and approved by Government authorities, the opinions and assertions it contains are the private ones of the writer, and are not to be construed as official or as reflecting the views of the Navy Department or of the Naval service generally. Readers will remember AIR TRANSPORTATION's reproduction in its February issue (page 39) of the official application form for Air Cargo Priorities. These forms are still available to readers who write to the publisher for them.

By LIEUTENANT (J.G.) LANGDON P. MARVIN, JR., USNR
Chairman, Interdepartmental Air Cargo Priorities Committee
War Production Board

THIS little article relates only to the priorities system for imports by Army, Navy or commercial planes. Although wartime regulations compel the omission of much important data, I hope that there will be something left of interest to readers of AIR TRANSPORTATION.

Under Executive Orders 8875, 9024, and 9128, the War Production Board is in charge of setting the "quantities, specifications, delivery time schedules, and priorities" of materials required to be imported for the war effort as civilian economy. Up until early March 1942, we had concerned ourselves entirely with setting up a priorities schedule for imports by ocean ships. At that time, we were faced with several particular shortages of strategic raw materials, due principally to three factors: the increase in requirements of these materials for war production, the delays in ocean transportation, and the relatively large number of sinkings of our total shipments of certain vital imports.

So it was manna from Heaven indeed when the Air Ferry Command, as it was then named, called us to say that an airline was operating into India, and would we please inform them what was important to carry on the return flights. We gladly did so by drawing up a priorities schedule and transmitting it to the Ferry Command and to the Metals Reserve Co., whose represenatives in India then proceeded to deliver the materials to the airport. Since that time large quantities have been flown all the way from India to the U. S.—with total losses of only two shipments—less than one-half of 1 per cent of the total, a remarkable achievement considering the thousands of different flights involved and especially compared to the high losses at sea (upwards of 15 per cent of our shipments at

one time), prior to the development of air transportation.

1. Priorities System:

(a) BLANKET PRIORITIES. Most imports by air are flown under blanket priorities from the War Production Board.

The system works like this: First the importers and manufacturers submit their import requirements to the appropriate Commodity Division of WPB, which also groups together the import requirements of the Armed services for that particular commodity. The Commodity Division then presents the total import requirements of raw material X with a justification for a priority on airplane space. Since there is considerable competition for airplane space between different materials, a careful review is given, by the Interdepartmental Air Cargo Priorities Committee, of all imports from a particular area. This Committee includes representatives of the Air Transport Command and Naval Air Transport Service (who tell us what is feasible and what isn't), of the Commodity Divisions of WPB (who present their different requirements and justify their claims for high priority), of the State Department (who keep us in line with foreign policy), of the Food Administrator (who handles agricultural products), of the Army-Navy Munitions Board (which handles the requirements of the armed services), and of the Board of Economic Warfare (which buys and forwards government purchases abroad in accordance with WPB directives).

We also have representatives of the British Ministry of Supply on the Committee, to present British claims for priority on American planes. We are always glad to give priorities to British shipments in cases where their own RAF service is inadequate and where their needs for materials are greater than our own. I might add that we have also given priority, on American planes out of China, for materials needed by India or by the U.S.S.R.

My job as chairman is to try to reach agreement among the claimants so as to evolve priorities which put first things first and also a schedule of the minimum amounts of each essential material which must be flown into the U. S. each month.

The priorities schedule, as evolved at the Committee meeting, is then approved by the War Production Board and transmitted officially to the Joint Air Transport Committee of the Army and Navy. This latter Committee then decides how much of the import requirements will be handled by N.A.T.S., how much by A.T.C., and how much by commercial planes, and issues orders to the field accordingly.

We count on the field service of BEW's Office of Imports to buy the materials, sort them according to grade, and forward them to the airports in accordance with the priorities schedules. It is expected that their newly developed field service will be of great assistance in expediting shipments.

(b) PRIORITY CERTIFICATES are used for special shipments of materials not covered by the general list. The application forms for priority have already been published in the February number of AIR TRANSPORTATION, and may be used by private importers, individuals, or government agencies.

These applications are reviewed in the WPB to determine the importance of the material, and are then transmitted to the joint offices of N.A.T.S. and A.T.C., which decide on what service the materials will be handled and then cable out the instructions to their men in the field to load the material in accordance with the priority.

Facts to Remember

"Without the amazing service which the Air Transport Command, the Naval Air Transport Service and commercial lines have performed for our imports program, many of our war factories would have closed down."

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"Cargoes imported by air have averaged 35 times as safe as cargoes imported by ocean ship."

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". . . airplanes bring us all our strategic materials out of China (a huge volume)."

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". . . only materials of small tonnage for which the greatest need exists are being given priority."

2. Results

Here I am particularly sorry that I can't tell you all I would like to about results, but the War Production Board guards closely data about shortages of strategic raw materials and the Army and Navy naturally don't want

information published about the volume of their overseas air operations. But there are still a few general facts which I can tell you.

(a) VOLUME. We expect that only about one pound out of every ton imported into the U. S. in 1943 will be brought by plane. (I am not including as arrivals by air strategic materials shipped in large volume by plane from China to India and then imported by ocean ship to the U. S.)

This being the case, only materials of small tonnage for which the greatest need exists are being given priority.

(b) SPEED. Materials come from India in 10 days instead of two months by boat; from Rio in three days instead of six weeks. Thus war factories in the U. S. which have nearly exhausted their supplies of raw materials can be supplied regularly by planes with raw materials located thousands of miles away.

(c) SAFETY. Cargoes imported by air have averaged 35 times as safe as cargoes imported by ocean ship. This is a rough total comparison which, of course, varies in each area of the world and at different times.

So, based on the above approximations concerning imports, I would conclude that air cargo compared to ship cargo is about 2,000 times smaller, ten times faster, and 35 times safer. I might go further in calculating the odds of delivering safely so much cargo by air compared to ship over a given period of time, but such a figure would be far too synthetic to be useful.

Suffice it to say that airplanes bring us all our strategic materials out of China (a huge volume) and a small but highly essential part of our total imports into the U.S.A.

Without the amazing service which the Air Transport Command, the Naval Air Transport Service, and commercial lines have performed for our imports program, many of our war factories would have closed down.

The Author

LIEUTENANT MARVIN *was educated at Harvard College, won his A.B. degree* magna cum laude; *was chosen for Phi Beta Kappa, president of Harvard Student Council, elected First Marshal of Senior Class. He was formerly executive secretary, the Shipping Priorities Committee (setting priorities for imports on ocean ships rather than planes).*

Martin Grants Nation Free Use of Patents On Famed Mareng Cell

Announcement that his company had granted the Government free license to one of its most cherished and lucrative patents, the Mareng Cell, has been made by Glenn L. Martin, president of the Glenn L. Martin Co., Baltimore.

The Mareng (for "Martin Engineering") Cell is a synthetic rubber fuel tank for airplanes and other conveyances. Its most spectacular version is the self-sealing (bullet-proof) tank—America's first, introduced shortly after Gen. H. H. Arnold, Chief of the Army Air Forces, called for such a device early in 1940.

Speaking for the Navy, Undersecretary James Forrestal wrote to Martin: "This is to acknowledge the receipt of the license which your company has issued to the Government covering self-sealing tanks. I want to congratulate you and your company on the spirit of public service reflected in this license."

Robert P. Patterson, Undersecretary of War, added: "Permit me to express to you personally and to your company, on behalf of the War Department, my sincere appreciation of this evidence of your patriotism and cooperation."

When war made a self-sealing tank necessary, Martin technicians under Reid B. Gray, chief of laboratories, developed a cell which could be shot through with heavy calibre machine-gun bullets and the wounds would heal immediately without loss of gasoline. As a result, American Bombers often have returned from combat despite hundreds of bullet holes. Two of the Martin B-26 *Marauders* which returned from the Battle of Midway after torpedoing two Japanese aircraft carriers were badly riddled—one with 300 bullet holes and another with 500. The Mareng Cells were perforated many times, but lost little of the precious fuel needed to bring them back over the ocean.

A more recent application of the thin-walled cells has been for turning ordinary boxcars into tank cars for transporting oil and fuel. Tests have shown this use of the cells perfectly feasible as a supplement to the inadequate supply of tank cars. A test car was equipped last August and has been hauling 13,500 gallons of oil per trip ever since. The average tank car carried between 8,000 and 9,000 gallons.

Panagra MAKES GOOD NEIGHBORS CLOSE NEIGHBORS

VICE PRESIDENT WALLACE
flies Panagra to visit
Five South American Countries

Recently Vice President Henry A. Wallace returned to the United States from one of the most important journeys of his long public career. For six weeks he has been traveling over vast areas of Central and South America—talking and listening to the peoples of many of our sister republics—forging ever firmer the bonds of mutual good will that unite this hemisphere for Victory.

From Panama south, a regular transport plane of the PANAGRA fleet, flying routes charted, developed and guarded by PANAGRA technicians, bore Mr. Wallace to Colombia, to Peru, to Chile, to Bolivia, to Ecuador, and back to Colombia. In all, PANAGRA transported Mr. Wallace some 7,000 miles.

We are most appreciative of this further opportunity to make good neighbors close neighbors.

Panagra PAN AMERICAN GRACE AIRWAYS, INC.
CHRYSLER BUILDING, NEW YORK

BUY WAR STAMPS AND BONDS

Common Sense, Not Globaloney, Needed in Air

At Last, A Clear-Cut View Of Postwar Air Problems The Layman Can Understand

EVER SINCE the shouting—which reached its crescendo at the time of Congresswoman Luce's "globaloney" speech—first began, the Editors of AIR TRANSPORTATION *have been striving toward a clear picture of the postwar aviation and air cargo problems. Nowhere have they found so clear, so understandable a view of the whole, incredibly complicated problem, as that of the Government's chief civil aviation authority, L. Welch Pogue, chairman of the Civil Aeronautics Board.*

Chairman Pogue's article is based on an address delivered to the Twin Cities chapter of the National Aeronautic Assn. on April 9. Every present and potential air shipper, every student of air cargo's future—in fact, every alert American—owes it to himself to read it for a better understanding of one of the greatest postwar problems the nation will face.

By L. WELCH POGUE
Chairman, Civil Aeronautics Board

THE winning of the war is the major problem confronting us all today. Planning for the postwar era in aviation, or in any other field, cannot be permitted to get in the way. To destroy Nazism, Fascism, and their Japanese counterpart, cancers on the world body politic, is our first job. But we fight best if we can look forward to a world we believe in, for it is the postwar world we fight for. Aviation, in wartime a destroyer of civilizations, if wisely used thereafter as a vehicle of trade and travel, offers us the best instrument yet devised to keep the world at peace. It is right therefore, without pausing as we concentrate on the war, to discuss the airplane as a peacetime force for good.

Peacetime problems of international air operations may be divided into three categories: (1) problems concerning military aircraft; the extent to which and the conditions under which they shall be permitted to fly outside the boundaries of their own countries; (2) problems, in the non-military field, relative to the necessity of meeting requirements imposed by each country relative to the operation of its own aircraft as well as those of other countries while within its domain—requirements in the fields of safety, customs, immigration, traffic control, public health; (3) problems involving the rights of both private and commercial aircraft of each country to fly over land within the domains of other countries.

We are not to concern ourselves here with any military aspect of aviation, problems included in the first category, nor with any of the problems which we have placed in the second category—safety, customs, immigration,

traffic control, or public health. And as to our third category, we are to confine ourselves entirely to the rights of commercial aircraft as distinguished from those of private aircraft not engaging in commercial operations.

The problems arising under this subdivision of the third category are not simple. Indeed, they are complex in the extreme. They are interrelated with many matters of national concern, and inject new considerations into the international field, a field already filled with difficult issues. We make our first mistake, therefore, if we blithely approach these problems upon the assumption that the future of aviation can be readily worked out more or less as an incident to consideration of other problems. Hard, close thinking is necessary. That is common sense. Only in that way can the future be planned wisely.

Problems Still Lack Names

As yet there does not even exist in the field of international aviation an adequate accepted terminology. *The careless use of certain new-coined terms without attempted definition has helped to complicate the picture.* The terms AIR SOVEREIGNTY and FREEDOM OF THE AIR are examples. They mean all things to all men. No one advocates the exercise of a nation's sovereign power to effect a total exclusion of foreign aircraft from its airspace. Nor does anyone advocate a complete absence of restraint on international commercial air operations. And rather than praise or condemn undefined terms, should we not rather search desirable objectives out of the maze and support them?

In the field of international aviation, co-operative effort among nations is the key to the solution of major problems. Nations of the world not heretofore neighbors have become such for the first time with the advent of worldwide air operations. Many, although living next door to one another, have never been able to cooperate in solving their international problems. The Canadian-U. S. relationship is the outstanding example to the entire world of what can be accomplished when two nations hold one another in mutual respect and entertain for each other a genuine feeling of trust and friendship. . . .

The length of the list of Canadian-U. S. joint boards, and other co-operative means for handling delicate international problems would probably be quite amazing to govenments of most other countries. In the field of aviation, too, Canada and the U. S. are already leading the way.

Practically every aviation problem of mutual concern to the two countries has been considered by one or another of several joint boards. As a result, radio range signals of the two countries are coordinated and the airways of both can be flown as a single system.

Pogue's Major Points

"Our own enlightened self-interest . . . requires that . . . a world charter be given to aviation now by granting generally the right of Commercial Air Transit . . . the right to get there, by flying over intervening nations and by landing as required in the interests of safety and of efficient operations."

"It is urged that we cannot permit planes of foreign nations to fly over our territory for reasons of military security. The opportunity of seeing and photographing our entire country with all of its military . . . establishments is raised as an objection. The argument overlooks the fact that our own domestic airlines, covering many more routes than would ever be used for Commercial Air Transit, are always available to any person, be he American or a foreigner, who might be interested in a bird's-eye view of our country."

"The argument overlooks entirely the lesson learned at Pearl Harbor. The Japanese had no right to fly over our island possession. Yet they were intimately familiar with its every detail. A nation 'on the make' will not be stopped by a piece of paper."

"Is it to be seriously suggested that the entire Russian domain is so covered with areas of a secret or military nature that Russia could not designate such areas as prohibited without making air travel impossible?"

"Let us have the vision, and above all, the courage, to give this marvel of mankind a charter equal to its need. That is common sense and common sense will eventually win out in the solution of aviation problems."

Joint tariffs between Trans-Canada, the Canadian transcontinental airline, and American domestic carriers have long been in effect. Schedules have been so arranged as to facilitate connections between the two countries at various points. Frequent meetings of operators of both countries are held on engineering, maintenance, operations, meteorology, and other aviation problems. This record of cooperative effort and achievement is one that the nations of the world could well emulate in the field of international aviation.

In every field of human endeavor, progress and development must inevitably encounter and overcome artificial, man-made obstacles and barriers; obstacles generally imposed unwittingly in the best of faith but poorest of vision. As we look back, many of these man-made barriers to progress suggest gross stupidity on the part of those who imposed them. Yet in their own time they were probably considered sound and in the public interest.

'Red Flag' Mentality Scored

A good example of this is typified by the forerunner of the automobile, the steam carriage, which appeared in England in the first quarter of the 19th century. By Act of Parliament, this form of carriage was early subjected to prohibitory highway tolls . . . and as if the tolls were not alone sufficient to arrest the growth of this new industry, we find on the statute books some 35 years later in 1865 a law admirably adapted to accomplishing this purpose. This law reduced the speed limit from 10 miles per hour in open country and five in villages, to four and two an hour, respectively. Doubly to insure the success of this legislative death sentence, the law further provided that at least three persons should be employed to drive or conduct the conveyance, that one of them should precede it by not less than 60 yards and carry a red flag constantly displayed. Since the man with the red flag could not ride in another steam carriage without in turn being preceded by another man with a red flag, the legislation effectively reduced the speed of the steam carriage to a foot or a horse pace, automatically depriving it of its principal claim to a place in the field of transportation. This Act was still in effect when gasoline motor cars were introduced into Great Britain, and the first man to bring such a vehicle into Scotland was arrested and fined for failing to have a man with a red flag precede his car* . . .

* Gibson, Charles R., *The Motor Car and Its History* (1927).

Artificial, man-made barriers of innumerable types and kinds have in the past been placed across the road of progress in every branch of transportation and commerce. By slow and laborious steps they have for the most part been swept aside but at a terrific cost to society which is needlessly denied, for a time, the advantages which could flow from a readier adoption of sound and progressive ideas.

Time for Decision at Hand

Today the nations of the world must decide to what extent artificial barriers can and should be removed from the path of aviation. This is an issue of first importance to the U. S., for it will determine the extent to which this nation, for years to come, shall have the right to engage in air commerce, over the shortest routes and in the most economical way, with every other nation.

As to the past, out of the right which every nation claims to exclude others from the air above its territory has grown a doctrine of international law under which each nation may legally exclude foreign commercial aircraft from the airspace over its domain. Special permission, generally secured through tedious negotiation, is today required before any commercial aircraft may enter or pass through a foreign nation's airspace. Similar special permission is required to land on foreign soil, not only for the purpose of discharging or taking on passengers and cargo, but for the far more limited purposes of refueling, obtaining repairs, or taking refuge from storms.

One writer*, in discussing international air transport problems, has had this to say concerning this system of special permissions:

> *"The necessity to bargain for landing rights has exercised a retarding effect upon the development of world air commerce. Routes which are technically feasible and commercially promising have remained unopened. . . . Small but favorably situated countries have at times exacted conditions for the grant of landing rights that may have been financially burdensome to the foreign carriers involved.*
>
> *"Italy, at a time when Italian air transport was weak and highly unprofitable, refused to grant landing rights to the British Imperial Airways on their way to*

* Lissitzyn, Oliver J., *International Air Transport and National Policy* (1942).

the east, unless the British company's receipts on a certain run were divided equally with the Italian company, which had much less traffic.

"Iran compelled Imperial to shift its route to the southern shore of the Persian Gulf by insisting that in flying over Iran the company's planes follow an inland route over mountains and deserts that was found to be too difficult and dangerous for utilization.

"Turkey barred all foreign airlines from passing over it in an east-west direction, primarily for military reasons, and as a result European services to southern Asia were deprived of the use of the shortest route. Turkey's attitude redounded to the advantage of Greece, which, it was reported, required all foreign airliners passing over its territory to land at Athens and to coordinate their schedules with those of the internal Greek air services. Similar illustrations could be multoplied indefinitely."

Here, an important point must be made. Before you can discharge and take on passengers and cargo at a foreign point you must first get there. In most cases intervening countries, many of which may be adequately served by other schedules, must be crossed over. The question of the right to get there is the first problem we meet in the international air riddle. It is by no means the only problem, of course. But because it is the first problem, it deserves our first consideration. In the field of private flying the right to pass through the airspace of a foreign country is known as the right of innocent passage. In the field of commercial flying this right to get there has never been given a name. Let us give it one now.

We shall call it the RIGHT OF COMMERCIAL AIR TRANSIT. To assure common understanding of the term let us define it as the right of commercial aircraft to fly through the airspace of any nation, who, having found it advantageous to do so, has agreed to this international arrangement. It would include the right to land at agreed airports to refuel, to make repairs, or to take refuge from bad weather. It would *not* include the right to discharge or take on passengers and cargo.

'Commercial Outlet' Defined

We will not here concern ourselves with the method of securing this latter right from foreign nations. Such a right might be referred to as a COMMERCIAL OUTLET. In passing it should be noted that a right to a COMMERCIAL OUTLET would *not* include the right to carry traffic between points in our own or in a foreign country, a right called "cabotage." That right will normally be reserved, naturally, for a nation's own airlines. Of course COMMERCIAL OUTLETS at desirable points are what we want. Many nations will see commercial and very likely other advantages to themselves in becoming such outlets for foreign air transport; and some nations, having their own foreign air transport systems, will naturally seek reciprocal arrangements for COMMERCIAL OUTLETS. But I will confine myself here to the objective, generally advantageous to the commercial interests of all nations, of securing the means to get to Commercial Outlets.

COMMERCIAL AIR TRANSIT, as I have said, means the right to get there, by flying over intervening nations and by landing as required, in the interests of safety and of efficient operations, in the territory of intervening nations.

Our own enlightened self-interest, and that of all other nations, requires that, as a part of aviation's future international arrangements, a world charter be given to aviation now, by granting generally this right of COMMERCIAL AIR TRANSIT. Such a charter, flexible like our own constitution, would constitute a world-wide framework, facilitating the future establishment of COMMERCIAL OUTLETS at all points where future world developments may make them desirable.

How Barriers Were Started

There could be no better example of a barrier to progress comparable to the man with the red flag, than those mentioned by the author from whose work I have quoted, where no right of Commercial Air Transit existed. Why should there be obstacles in our way to reaching Commercial Outlets? Yet a place for such barriers in the international field was expressly affirmed under the Convention for the Regulation of Air Navigation concluded at Paris and known as the Paris Convention of 1919. Provisions in the Convention as originally drafted respecting the right of commercial aircraft to operate over the domains of the several parties were ambiguous. Some of the parties, notably England and the U. S., favored the interpretation of these provisions so as to authorize the commercial aircraft of any of the parties to the Convention to operate over the territories of the others provided only

that they follow designated routes. Other nations interpreted the original provisions as permitting such operations only after securing the permission of each nation through whose airspace any commercial operation would pass. In 1929, at the suggestion of Germany, an amendment settling the ambiguity in favor of the latter construction was proposed and adopted, 27 nations favoring the proposal and four, England, the U. S., the Netherlands and Sweden, voting against it. The U. S. has never ratified this Convention either originally or as amended. The amendment as now in effect provides:

> *"Every contracting State may make conditional on its prior authorization the establishment of international airways and the creation and operation of international air navigation lines, with or without landing, on its territory."*

Immediately after the adoption of this amendment, there was proposed by way of further amendment the provision:

"This authorization may not be refused except on reasonable grounds." The provision was not adopted with the result that any party to that Convention may refuse at its discreion to permit foreign commercial operations over its domain.

In 1928, 21 nations of the Western Hemisphere completed and signed the Pan-American Convention for Air Navigation, known as the Havana Convention. Under the terms of this Western Hemisphere Convention as written each of the parties undertakes to permit commercial aircraft of the other parties to pass through its airspace subject to the requirement that designated routes be followed. However, these terms have not yet been used as the basis for operations. Only a few nations of this hemisphere (the U. S. being one) have ratified this Convention and it, of course, does not apply to the rest of the world. So generally, throughout the world, the establishment of both the right of Commercial Air Transit and Commercial Outlets requires the negotiation of agreements with each nation whose airspace is used.

Arguments Knocked Down

It is urged that we cannot permit planes of foreign nations to fly over our territory for reasons of military security. The opportunity of seeing and photographing our entire country with all of its military and defense establishments is raised as an objection.

The argument overlooks the fact that our own domestic airlines, covering many more routes than would ever be used for COMMERCIAL AIR TRANSIT, are always available to any person, be he an American or a foreigner, who might be interested in a bird's-eye view of our country. It seems absurd to suppose that effective spying will be done in any such casual way, through the small window of an airliner. The real McCoy, if he uses air at all for spying, will hire a local flivver of the air, with flexibility of operations and no fixed route to follow, in which to have observations made. The argument also overlooks the fact that regardless of the degree of air commerce expansion, each country may prohibit air travel by its own civil aircraft as well as those of a foreign country, over designated areas and each may specify the airports at which foreign aircraft may land for technical purposes. The argument overlooks entirely the lesson learned at Pearl Harbor. The Japanese had no right to fly over our island possession. Yet they were intimately familiar with its every detail. *A nation 'on the make" will not be stopped by a piece of paper.*

Trade Alone Will Govern

The question has been frequently asked, with an emphasis indicating the anticipation of a negative answer: "Would Russia permit planes of foreign nations to fly over any portion of its domain?" Let us see what factors are involved in an answer to this question.

A glance at a polar projection map will disclose that Canada and the U. S., next door neighbors on the North American Continent, and Russia and China on the European-Asiatic Continent, are in comparable geographical situations in certain important respects, from the standpoint of air transportation. . . . On this solid foundation firmly rests the conclusion that the U. S. and Canada on the one hand and Russia and China on the other should strongly support the establishment of the right of Commercial Air Transit on a world wide basis. The U. S. lies on Canada's shortest route to Mexico, Central America, South America, and the Carribean Area. China occupies a somewhat similar position with respect to Russia's shortest route to Southeast Asia. Alaska lies athwart Canada's probable route to all Asia. Canada in turn lies under our great circle courses to both Asia and Europe. And Russia extends along all the North and much of the West of China.

This may seem like nothing but mental

gymnastics. Any Yankee trader knows that the only routes that will count will be those to industrial centers where business is good. The soundness of that view is self-evident. But we are looking at an age ahead—not just today. And many of these possible routes even now are rich in promise. By what fantastic logic is it to be assumed that Russia or the U. S. will choose to sit back on their respective haunches and, in wide-eyed amazement literally watch the world go by. Is it to be assumed that Russia onr any of these nations will decline to participate to the fullest possible extent in international air commerce?

How Can 'Big Four' Act?

What must nations give to secure that right for themselves? The British Commonwealth, Russia, China and other nations including the U. S., would be required to permit the operation of foreign planes over portions of their territory. But each would retain the right to designate areas over which no planes would be permitted to travel. And each would retain the right to designate the particular airports which could be used by foreign planes for refueling and for other technical purposes. And bear in mind that this right of commercial air transit relates only to civil aircraft.

Is it to be seriously suggested that the entire Russian domain is so covered with areas of a secret or military nature that Russia could not designate such areas as prohibited without making air travel impossible? Is it possible that anyone would question the ability of the U. S., by designating airports and prohibited areas, to permit such travel over its domain without disclosing military secrets? If Russia desires to participate to any extent in international commerce, and there is no reason to think that it does not, it seems obvious that Russia would be as anxious as any other nation on earth to enter into the necessary arrangements for COMMERCIAL AIR TRANSIT.

For generations the Americas have enjoyed the happy luxury of being able to develop their own natural resources and to go their ways without worrying too much about foreign affairs. This may well have been the wisest course in the past. But in the brief span of a quarter century the airplane has changed all that. The protective character of our oceanic borders has gradually disintegrated as the span and power of the airplane have increased. Today we are either friendly neighbors or close enemies to every country in the world. We are within easy reach of them and they of us. Our position in the world has been so changed as to make it clear that we can no longer avoid participation in the world's affairs on a basis equitable and just to all who seek to channelize progress into paths of permanent peace.

'50 Hours from Everywhere'

Today, no two important points on the globe are farther apart in time by air than are New York and San Francisco by train. Distance in terms of miles is meaningless. Substantially every nation on earth is less than 50 hours by air from any other nation. Reflect a moment on these figures:—Traveling at 300 miles per hour, a cruising speed which transport planes should attain shortly after the war, it would take less time to go from New York to Moscow than it would take to go by train from New York to Chicago. It would take longer to go by train from Minneapolis to New York than it would from Minneapolis to Tokyo by air.

In the new geography, oceans, shore lines, mountains, deserts, and swamps are hurdles overcome. Strategic ports and channels, determiners of world power in the past, are of little significance. New trade routes and the development of trade and travel in new areas are inevitable. But every nation having the authority under international law, to control the airspace over its own territory, may do so *to the benefit or detriment of international operations.* The problem, therefore, is what kind of common sense arrangements can be made by nations for commercial use of the air mutually satisfactory to all concerned.

These Are Our Choices

1. There is, of course the possibility of continuing the practices of the past. We have already indicated the shortcomings of this alternative.

2. Secondly, there is the suggestion that by a single agreement between many nations, particularly routes and airports might be designated for internal air traffic. This suggestion assumes the ability to determine for all time the future map of international air commerce, a task obviously impossible at this early period. The natural routes and termini for international air commerce can only be determined from time to time by future developments creating demand for air transpor-

tation. The suggestion fails to allow for changes—changes which we know are bound to come with future developments in the field of air commerce.

3. Under a third suggestion "zones of influence" throughout the world would be assigned, one to each of the several nations having extensive air transport industries. Any plan of this nature smacks of outworn imperialism and has an obviously limiting effect upon the rights of smaller nations who may well wish to enter the field. There would appear to be inherent in any such plan the likelihood of overlapping of zones with resulting friction between nations and groups of nations.

4. A fourth plan is the one we have suggested whereby, as a part of aviation's future international arrangements, each of the nations who is a party to the COMMERCIAL AIR TRANSIT agreement grants to each of the others the right of COMMERCIAL AIR TRANSIT for non-military aircraft over its domain, thus enabling the planes of each to fly over the others to their COMMERCIAL OUTLET.

In the march of man, the beginning and the end of new eras can often be seen only with hindsight. But the air age upon which we are entering announced itself with the unmistakable roar of propellers. Already we know something, but far from all, about the changes which the airplane will bring. It has reduced the world to manageable proportions. Let us have the vision, and above all the courage, to give this marvel of mankind a charter equal to its need. That is common sense, and common sense will eventually win out in the solution of aviation problems.

***ON THE INSIDE PAGES OF THE INSERT:** A revelation of commercial airship progress. The world map shows the number of voyages made by the* **Graf Zeppelin,** *first of all commercial airships —a record unrivaled by any kind of transport until Pan American Airways launched its transpacific and transatlantic services.*

AMERICAN AIRLINES, INC.
'EXPEDITER'
of International
Air Express
TO MEXICO
When you mark your shipments to Mexico: "via American Airlines" you need only fill in this brief American Airlines' Shipper's Letter of Instructions. We prepare the International Waybill for you. To obtain our easy-to-use Shipper's Letter and for International Air Express pick-up, call Railway Express Agency, Air Express Division.
AMERICAN AIRLINES Inc.
ROUTE OF THE FLAGSHIPS

When Air Cargo's Ship Comes In

IT COULD BE LIGHTER-THAN-AIR

By P. W. LITCHFIELD *Chairman of the Board, Goodyear Tire & Rubber Co.*

COMMERCIAL airship lines across the two oceans might have been well established if the *Hindenburg* had not been burned in a hydrogen fire in May 1937.

Germany shelved its program because it could not get non-inflammable helium gas, which was a U. S. monopoly. This country had worked up a program but did nothing to put it into effect.

Up to that time the *Hindenburg* and the *Graf Zeppelin*, the first commercial airships, had compiled a rather impressive record. They had covered 4,000,000 miles of Arctic, tropical, and transoceanic flying without passenger accidents of any kind, and with a regularity of departure and arrival which no other craft has approached before or since, at times taking off in a fog which hid the upper half of the ship, and when other aircraft were grounded.

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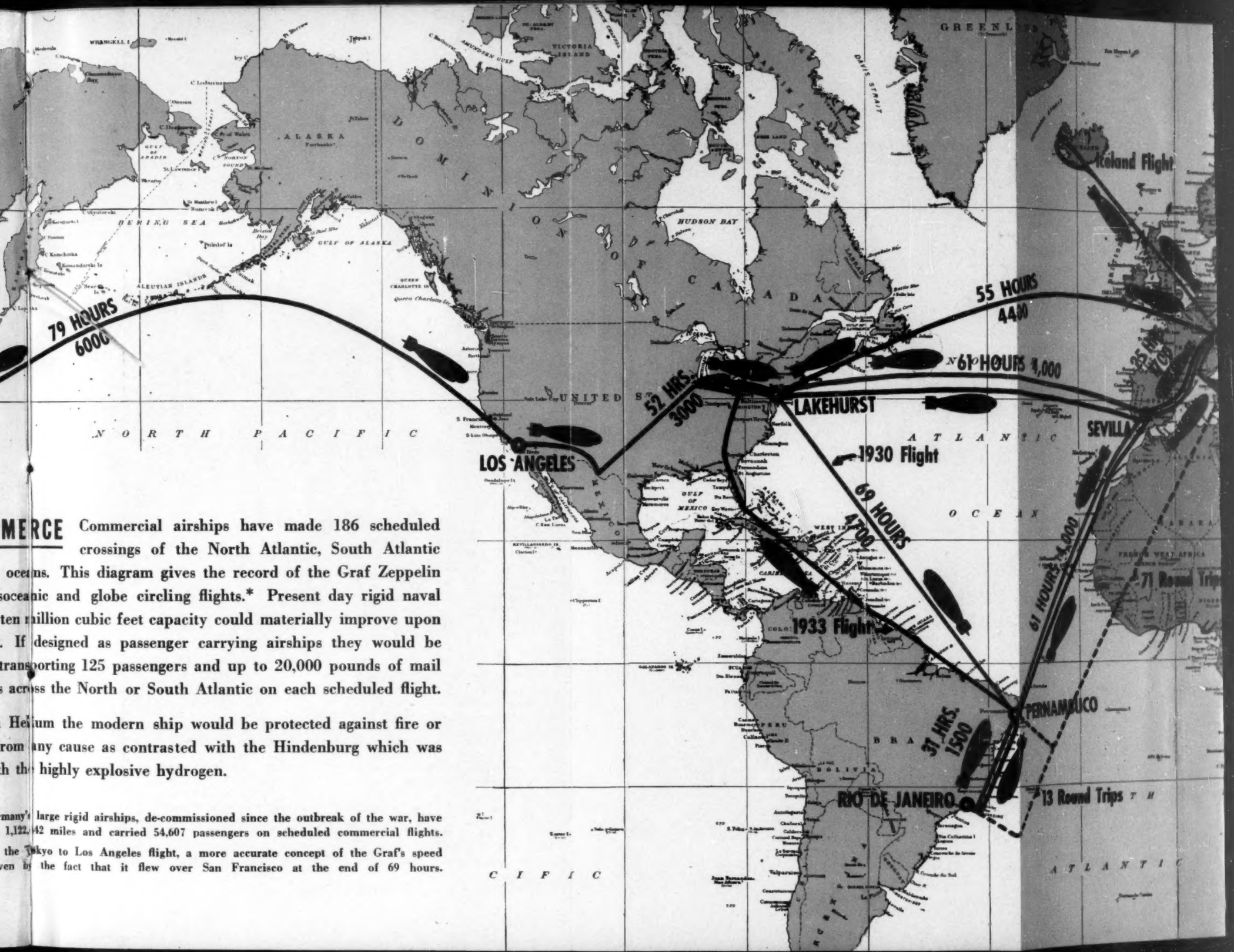
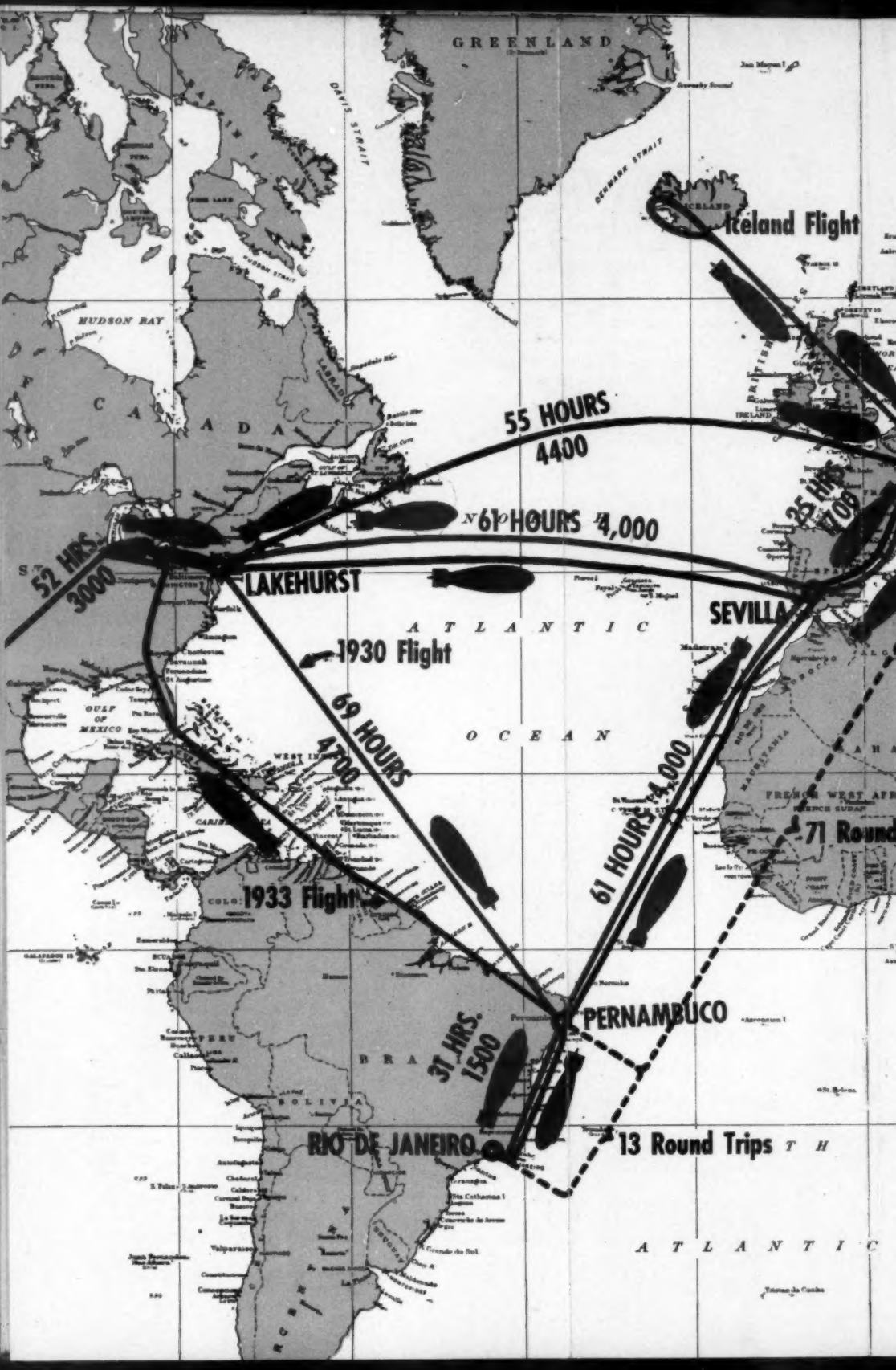


MERCE Commercial airships have made 186 scheduled crossings of the North Atlantic, South Atlantic oceans. This diagram gives the record of the Graf Zeppelin soceanic and globe circling flights.* Present day rigid naval ten million cubic feet capacity could materially improve upon . If designed as passenger carrying airships they would be transporting 125 passengers and up to 20,000 pounds of mail s across the North or South Atlantic on each scheduled flight.

Helium the modern ship would be protected against fire or rom any cause as contrasted with the Hindenburg which was h the highly explosive hydrogen.

many's large rigid airships, de-commissioned since the outbreak of the war, have 1,122,142 miles and carried 54,607 passengers on scheduled commercial flights.

the Tokyo to Los Angeles flight, a more accurate concept of the Graf's speed ven by the fact that it flew over San Francisco at the end of 69 hours.


GREENLAND
DAVIS STRAIT
DENMARK STRAIT
Iceland Flight
HUDSON BAY
CANADA
55 HOURS
4400
61 HOURS 4,000
52 HRS.
3000
LAKEHURST
SEVILLA
ATLANTIC
1930 Flight
OCEAN
69 HOURS
4700
61 HOURS 4,000
71 Round
GULF OF MEXICO
1933 Flight
31 HRS.
1500
PERNAMBUCO
RIO DE JANEIRO
13 Round Trips
ATLANTIC

North Pole Flight
To 25° North
UNION OF SOVIET SOCIALIST
101 HOURS
7000
TOKYO
FRIEDRICHSHAFEN
Egyptian Flight
1 Round Trips
ARABIAN SEA
BAY OF BENGAL
INDIAN OCEA
INDIA
IRAN (PERSIA)
ARABIA
SYRIA
TURKEY
ROMANIA
YUGOSLAVIA
BULGARIA
BLACK SEA
AEGEAN SEA
LIBYA
SUDAN
ETHIOPIA
KENYA
BELGIAN CONGO
ANGOLA
NIGERIA
WEST AFRICA
CHAD
ARABIAN DESERT
RED SEA
PERSIAN GULF
AFGHANISTAN
BALUCHISTAN
NEPAL
SOUTH WEST AFRICA
SOUTHERN RHODESIA
NORTHERN RHODESIA
MADAGASCAR

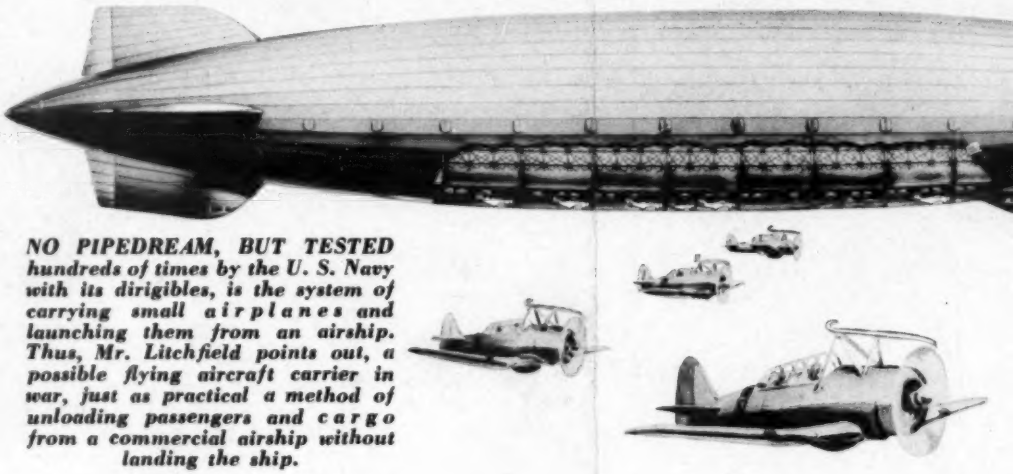
In 1929 the *Graf Zeppelin* flew from Germany to the U. S. by way of Russia, Siberia and Japan with only one stop, that in Japan. The trip from Tokyo to the Golden Gate was made in 68 hours.

These facts are so striking that it seems fairly likely that someone some day will pick up the challenge. It might be a far-sighted airplane or steamship line experienced in the business of making transportation of men and goods pay, and who saw in the airship a vessel which combined comfort and speed, and could travel over sparsely inhabited areas, or routes where fueling stops would be difficult or impossible.

It would be an American operation, not only because America is transportation-minded, perfected the steamboat, the airplane, the streamlined train, and led the world in utilizing the private automobile, the bus and the truck, but necessarily because America is apparently the only country which has helium—and has it in abundant quantities.

Disasters Produced Inertia

So we might see after the war American airship lines from New York or Washington to Pernambuco, to Capetown, to Calcutta, to Sydney, or westward from San Francisco or Los Angeles across the Pacific, quickening communication, expediting the movement of business passengers and cargo during the reconstruction period, giving this coun-



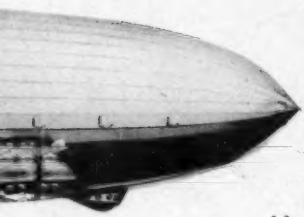
***NO PIPEDREAM, BUT TESTED** hundreds of times by the U. S. Navy with its dirigibles, is the system of carrying small airplanes and launching them from an airship. Thus, Mr. Litchfield points out, a possible flying aircraft carrier in war, just as practical a method of unloading passengers and cargo from a commercial airship without landing the ship.*

WHEN THE HINDENBURG, *pride of Germany's Luftschiffbau Zeppelin, came down in flames at Lakehurst, N. J., in 1937, following the earlier losses of the U. S. Navy Airships* Akron *and* Macon, *most laymen promptly consigned airships to oblivion, forgot about them. Not many people remember that Germany had a super-*Hindenburg, *the LZ-130, ready to fly before the war began, when Interior Secretary Ickes blocked shipment of U. S.-owned helium to lift it into the air, and that a still bigger LZ-131 was then under construction.*

But airships are far from dead. Conceivably, they may one day provide an answer to the needs of CARGO-BY-AIR *that will rival the airplane for practical cargo-carrying economy, if not for speed. To bring you up to date,* AIR TRANSPORTATION *presents this highly significant exclusive article by P. W. Litchfield, longtime head of Goodyear, whose subsidiary is the only U. S. airship-builder. Few men in America or the world are better qualified to write on the subject of these giant aircraft and their potentialities.*

try the most fully coordinated transportation system of any nation, one which used trains, trucks, steamships, airplanes or airships, wherever they best fitted in, giving this country a unique position in the postwar world.

But America, too, closed up shop in the matter of rigid airships after the *Hindenburg* and the two Navy ships were lost, although in the case of the American ships extensive scientific investigation revealed no shortcomings in the type and concluded that the accidents were those which were to be expected in any pioneer craft—and were unlikely to recur. Certainly the Germans had proved fairly definitely that rigid airships could be operated safely, and Americans will not accept the conclusion that another nation is able to do something which is impossible for us to do.



On top of this the present war has given an impressive demonstration of the ruggedness and airworthiness of lighter-than-air craft through the performance of the Navy's non-rigid blimps, used for coastal patrol against enemy submarines.

So lighter-than-air came back into men's thinking, and airship men asked why we were not using rigid airships as part of defense, in long-range reconnaissance beyond the capacity of the blimps, in convoy duty and as high-speed airplane carriers.

But we had no commercial airships to convert to Naval use when the war started, and we hesitated to start to build them because we realized the time which would be needed to create plants, complete designs, tool up and get ships into the air, and we thought the war might be over before then. We are not now so sanguine about the prospects of an early peace.

Easy Conversion for Peace

Such ships, if started now, would not be wasted, even if peace had been reached by the time of their launching. For a Naval airship can be converted to commercial operations or *vice versa* in *a fraction of the time required for seagoing merchantmen.* The Government

BABY AIRSHIPS, the famed blimps, are playing a vastly important role in anti-submarine warfare today. Blimps, like dirigibles, are lifted by helium, can stay aloft for long periods, hover over a single spot indefinitely.

agencies who worked on plans to get commercial airship lines started during the 1930's had in the back of their minds the fact that these ships, along with trained crews and shore establishments would be available on short notice to the fleet as a secondary line of defense.

In like manner, Naval airships built during the present war might give a long forward start to commercial operations afterward and help this country take the lead in the economic rebuilding which is ahead.

Millions of dollars have been spent on harbors, airports, highways, terminal facilities, to improve our transportation system on land, sea and in the air, but up to now the commercial airship has had little or no such help from Government.

If we accept the formula that speed and comfort of travel affect volume of travel, then it would seem reasonable that the commercial airship would not be in competition with existing transportation

agencies so much as it would be a supplement to them.

If a given passenger were in no hurry and wanted the maximum of comfort, he would select a steamship; if his business was urgent, he would take the airplane despite some sacrifice of comfort; he might select the airship if he wanted more comfort than the airplane afforded on a long trip, and more speed than the steamship could attain. The size of the airship makes it less sensitive to unstable air, and its ability to fly around storms rather than have to buck through them makes seasickness and airsickness virtually unknown aboard the dirigible.

Unloading But Not Landing

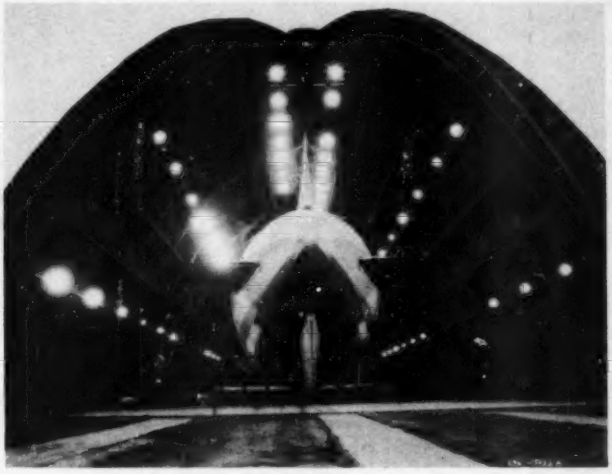
The demonstrations given by the Navy airships *Akron* and *Macon* of the feasibility of picking up and launching airplanes while in flight could be utilized in commercial airships, with the planes bringing passengers to the main ports, or enabling them to embark or disembark en route. The same plan might disembark important cargoes.

Considerable data on operating costs are available through the records of the eight years of operation of the *Graf Zeppelin* and the two years of the *Hindenburg*. On the basis of actual experience, the *Hindenburg* showed an ability to *operate at a profit on passenger revenue alone.* Helium for American operations would cost slightly more but might well be offset by reduced insurance premiums. American airships, like American airplanes and American merchant ships, will naturally cost more to build and operate due to our higher cost and wage standards, and in the case of the airship these would have to be offset through additional revenues secured from mail, express and freight cargoes.

With the consummation of proposals to carry all postwar first-class mails across the Atlantic by air [*see page 42 for a current proposal in Congress*], the large bulk-carrying ability of the airship would come into its own and the economic picture is not too unattractive.

100 People, 10 Tons of Cargo

This discussion has in mind an airship a little larger than the *Akron-Macon* or *Hindenburg* type, perhaps on the order of a 10,000,000 cu. ft. ship, general designs for which have been made, carrying from 50 to 100 passengers and five to 10 tons of mail and express, over distances in excess of 3000 to 5000 miles, at a cruising speed of 75 miles an hour, logging a minimum of 1350 miles per day.



***THE LAST U. S. AIRSHIP** of superliner size was the Navy's* **Macon,** *here shown under construction in the great Goodyear Aircraft dock at Akron.*

Some large-size hangars and maintenance facilities are already in existence on both American coasts and might be utilized after the war, as well as those at Rio de Janeiro, Karachi in India, and Cardington, England. Landing and mooring facilities have been used in the past at Miami, Pernambuco, Seville and Honolulu, and might be set up again there or elsewhere.

It would seem that eventually America's advantage in the exclusive possession of the non-inflammable helium gas would be utilized by a country as convinced as America is of the importance of good transportation.

The Man Behind the Story

PICTURE a tall, grey-haired 200-pounder, composed of manner, frugal of speech, penetrating of gaze. It is Paul Weeks Litchfield, veteran head of one of the world's largest industries, the Goodyear Tire & Rubber Co. [see cut, top of page 29].

Wherever he may be, in a Stratoliner winging over the Andes, seated in his plainly furnished office which faintly vibrates to the clank of the sprawling Akron plant's conveyor chains and mixing mills, at his winter home in the shadows of Arizona's White Tanks or at his rough lodge on the sparkling waters of Northern Ontario's Lake Timagami, there is the nerve center of Goodyear's far-flung activities.

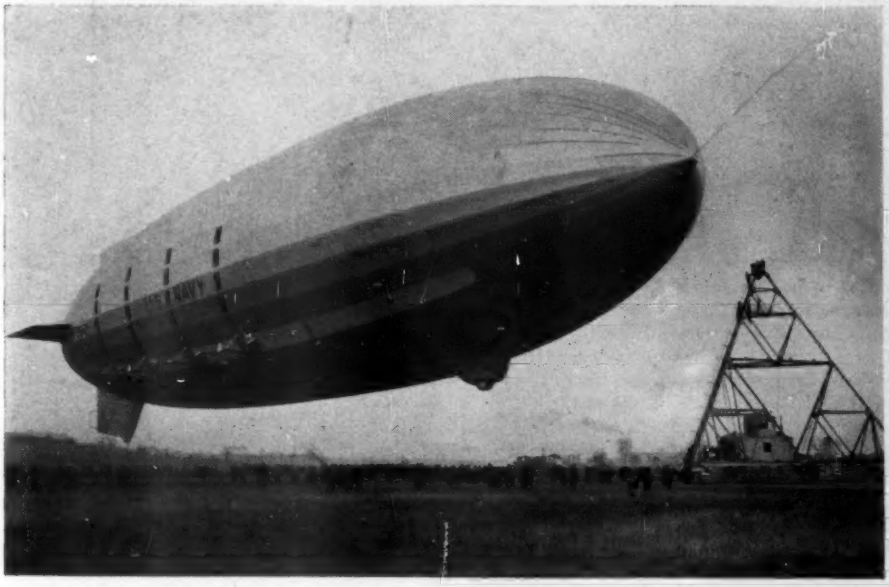
Believing time the most precious element in life, he looks on aviation and the trans-oceanic telephone as vital contributions to the usefulness of man's time. He makes frequent use of both; traveling as much as 100,000 miles in a year.

More than 40,000 stockholders have entrusted to him a portion of their accumulations; more than 100,000 independent dealers depend on him for products and policies which will stand the fire of competition.

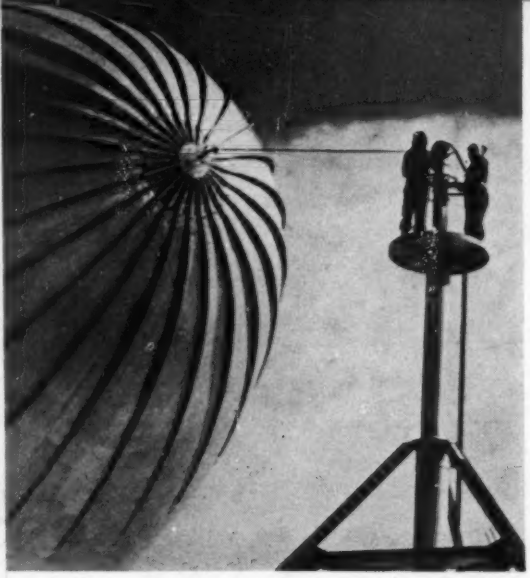
To Litchfield, it's all in the day's work. He knows his industrial machine in infinite detail because he has seen it grow, has had more to do than any other person with its building in the 45 years since it was an infant and he joined up for life.

Now in his 67th year, he looks back over American's 20th century surge in material development, forward to future industrial progress.

One of his earliest memories goes back to a day in Boston when he was a child and his mother held him up so that he could see



THIS WAS THE* AKRON, *but the ship Mr. Litchfield proposes, like the one Germany completed before the war, is far bigger, would carry across the Atlantic 50 to 100 passengers and at least 10 tons of cargo beside. Goodyear Aircraft Corporation officials are careful to point out, however, that they have no illusions that the airship has a chance ever to displace the plane. Rather will each supplement the other. Meanwhile, airship advocates rejoiced this month as the Navy promoted the* Akron's *old sponsor and top dirigible expert, Capt. Charles E. Rosendahl, to the rank of Rear Admiral.



***WATCHDOGS OF THE CONVOYS,** Goodyear calls the non-rigid blimps that are a primary part of antisubmarine war in the Atlantic. Left, a dramatic shot of a blimp being moored to its mast at a Navy base. Today's blimps are much bigger, longer cruising than those of World War I.*

over the crowd that had gathered at the station to greet President Hayes.

"You are looking at the President of our country," she told him. "You must never forget this occasion."

More than 60 years later, in 1940, the words echoed as he dictated a terse order to all Goodyear employes:

THE NEEDS OF OUR COUNTRY'S DEFENSE WILL RECEIVE THE FIRST CONSIDERATION OF GOODYEAR'S FACILITIES, ITS RESEARCH AND ITS PERSONNEL.

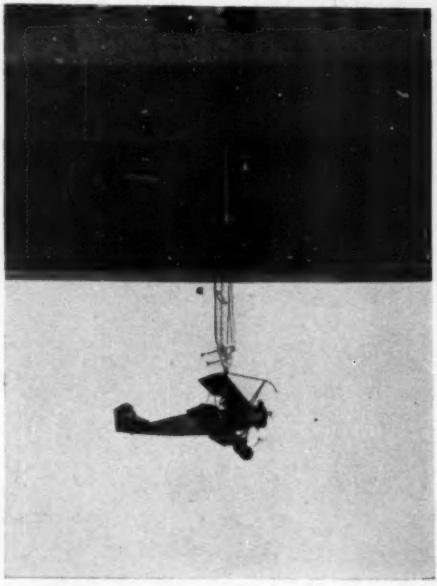
The order found immediate response in the speed Goodyear put into assembling gas masks, producing special tires and tubes to resist bullet fire, increasing capacity to make blimps, barrage balloons and pneumatic liferafts for pilots of planes. A long line of defense materials began to flow from the Goodyear rubber factories and the company's huge airship dock in Akron was converted into a plant for the manufacture of tail surfaces and kindred sub-assemblies for America's growing fleet of bombers and other fighting planes.

When the war department asked Goodyear to take over the unfamiliar task of managing and operating a huge powder bagging plant now under construction at Charlestown, Indiana, Litchfield said yes.

A New Englander by birth, Litchfield traces his ancestry back to the *Mayflower*. He was educated at Massachusetts Institute of Technology, joined Goodyear as a production executive in 1900 when the company was less than two years old and advanced to its presidency in 1926.

Meanwhile he maintained a lively interest in the Boy Scout movement, studied and wrote on economics, labor relations and other subjects, pioneered in the development of airships. During World War I he inaugurated the first long-distance motor truck line to demonstrate to truck manufacturers that pneumatic tires would make possible such a system of transport.

Mother Litchfield, now 92, alert and interested in the activities of her busy son, lives with him in his big home overlooking the Cuyahoga Valley on the outskirts of Akron.



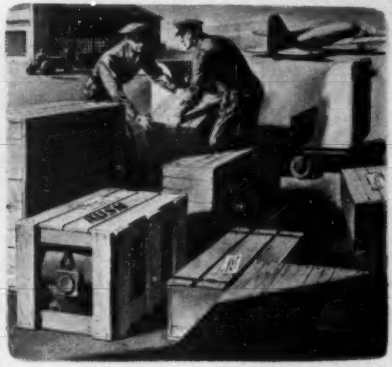
***HOW IT'S DONE:** Closeup shows "hook-on" gear for launching planes from airplane-carrying airships, as described in Mr. Litchfield's article. Goodyear, no partisan for either lighter- or heavier-than-air craft to the exclusion of the other, makes both airships and airplanes (Navy Corsairs, under Vought designs).*

This motor got on the job

A. M. PICK-UP: "Rush new motor Air Express" was the order a supplier received at 9 A.M. Ready for pickup at 10, it was taken to the airport, flown hundreds of miles to destination . . . and installed on a vital war job that same afternoon.

This motor was delayed

P. M. PICK-UP: Shipments ready for morning pickup but held for "late afternoon" routine, may be subject to unavoidable delay. Heavy, peak-hour traffic may keep them grounded until a midnight or an early morning plane.



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AIR CARGO PERSONALITIES

JACK FRYE

President, Transcontinental & Western Air, Inc.

BIG, friendly, capable Jack Frye, TWA head, has had a true Horatio Alger career. First bitten by the aviation bug back in Texas when he was a youngster of 14, he required no urging when he saw an opportunity to learn to fly several years later.

Born in Sweetwater, Okla., in 1904, Frye was reared on the family ranch near Wheeler, Tex. After watching three old army *Jennies* land near a pond on which he was ice-skating, he was convinced he wanted to be a flyer despite the fact that he caught pneumonia while running errands all day for the pilots and spent 10 weeks in bed. Planes in Texas in those days being "like angels' visits, few and far between," he had no chance to nurse his ambition.

Opportunity came after he set out for California with his brother and two other boys in an old Model T. On reaching Los Angeles, they trudged about searching for jobs, and in despair of finding any, all but Jack returned home. He persisted, finally landed a job as dishwasher at $12 a week. Three weeks later he was earning $18 selling newspapers. Soon he was jerking sodas in a corner drugstore for $25 a week. This was his last job outside of aviation.

A few weeks after starting his drugstore job he went out to an airfield where Burdette Fuller, who operated scenic flights and gave instruction, talked him into taking a ride. He soon was taking lessons and on the day he soloed he also took up his first passenger, who was blissfully unaware of Frye's inexperience.

Jack decided he really liked the business and borrowed enough money to buy a half interest in Fuller's plane. One of the new partner's first students was Paul E. Richter, until recently executive vice president of

TWA and now Commander Richter, U.S.N. Another student, W. A. Hamilton, later an official with Douglas Aircraft and now also in the Navy, joined Frye and Richter and the three bought out Fuller's interest. They then formed the Aero Corp. of California.

They successfully conducted a flying school, a service and maintenance base and an airplane sales agency. In 1927 they established an airline subsidiary, Standard Airlines Inc., with Frye president of both companies.

Three years later this inauspicious beginning of the present extensive airline system of Transcontinental & Western Air, Inc., merged with Western Air Express, and Frye became director in charge of operations. In October of that same year he took over the position of operations vice president of TWA, the company formed by the merger of Western Air Express and TAT-Maddux.

He assumed his duties as president and director of TWA in 1934. That same year he set a cross-country transport plane record when he personally flew the last load of air mail in the Douglas DC-1 from Los Angeles to New York in 13 hours and two minutes following the cancellation of Government contracts. He flew the first transcontinental mail load under the new contracts in the then astonishing speed of 11 hours and 31 minutes in a Northrop *Gamma* mail plane.

In the ensuing years Frye has necessarily concentrated on executive management of TWA, but he still holds an airline transport pilot's license.

Active in keeping his company in the forefront, particularly in technical development, he headed the committee of TWA experts who in 1932 drew up the specifications for the DC-1, prototype of the famous Douglas DC series. He accomplished some of the preliminary experimental work and later assigned D. W. Tomlinson, formerly TWA's vice president in charge of engineering, to complete the research in high altitude flying which was incorporated into the development of the Boeing *Stratoliner*. This revolutionary type craft, the first four-engine, high-altitude plane to be used on a domestic airline, was placed in service by TWA in July 1940. Today, TWA still operates these planes—now in transoceanic service for the Army's Air Transport Command.

Frye and Howard Hughes conceived a more advanced ship than the *Stratoliner* in the Lockheed *Constellation*, which made its maiden flight early in 1943 (AIR TRANSPORTATION, *February*, 1943). Lockheed officials say it is faster than the Japanese *Zero*.

No swivel-chair executive, Jack Frye still flies his company's research plane frequently on business and it's no trick at all for him to schedule an early lunch in Kansas City, his headquarters, and keep a dinner engagement in Washington, where he spends much of his time in connection with the far flung war activities of his company.

Japs Now Using Ryan Planes They Captured from Dutch

Airplanes built in San Diego for training Netherlands Indies military pilots which were lost to the Japs when the Dutch colonies were invaded are now being used by the Japanese Army to train its fliers, according to word from a Dutch officer escaped from Java.

Lieutenant Commander H. F. C. Holtz of the Royal Netherlands Military Flying School at Jackson, Miss., has just revealed that approximately 50 STM primary landplane trainers made by Ryan Aeronautical Co. were taken when the Japanese invaded the Netherlands East Indies.

The escaped officer has just joined his compatriots in Mississippi after a roundabout trip from Java, according to Commander Holtz. He said that during his imprisonment he saw the Japs using the planes for aerobatic training. The "one enjoyable sight" he saw during his captivity was when two of the ships collided in mid-air as the result of poor piloting.

This fleet of trainers was part of a consignment of land and seaplane trainers shipped from the Ryan factory in the fall of 1940.

All First Class Mail To Fly, New Bill Urges

Oklahoma Congressman Sees Measure As Logical Answer To Many Postwar Problems

"The celerity of the mail should always be equal to the most rapid transition of the traveler."

THE quotation is not that of a modern aviation enthusiast. Nor, indeed, of anyone who ever had his feet off the ground. It appears in the annual report for fiscal 1834 submitted by Postmaster General William T. Barry, member of Andrew Jackson's first Cabinet.

Its rediscoverer is Representative Lyle H. Boren, of Oklahoma, who uses it ably to drive home the point that the time is here for putting all first class mail in the air—not when the war is over, but beginning at once and proceeding as rapidly as the transition can be made. And Congressman Boren finds plenty of historic precedent to bolster his view, plus plenty of powerful reasons why his new bill, to accomplish this new milestone of air progress, is vitally necessary to the postwar future of the nation. It will, he points out, have a vital bearing on the future of aviation, of air cargo, and, indeed, of the whole national economy.

Postmaster General Barry [Congressman Boren declares] was but restating the historic policy of the Postal Service from the time of its inauguration under the direction of Postmaster General Benjamin Franklin.

From the birth of our Nation to the present, officials of the Post Office Department have both encouraged and utilized the most rapid means of communication between the far reaches of our country, recognizing always that with the increasing speed of mail delivery the greater well-being of the Nation was insured. Postmaster General Barry succinctly outlined the logic of this policy in that same annual report when he wrote:

> *That which shortens the time of communication, and facilitates the intercourse between distant places, is like bringing them nearer together. While it affords convenience to men of business, it tends to counteract local prejudices, by enlarging the sphere of acquaintance. It perpetuates existing friendships, and creates new ones, by which the bonds of union are strengthened, and the happiness of society promoted.*

The stage coaches carrying mails were given the right-of-way over all other traffic that their speed might be increased. The Federal Government stepped into the road-building picture by designating certain highways as post roads and these were always more highly improved than other routes to insure greater speed. Over great distances, where further time could be saved from that required by the stagecoach, such institutions as the Pony Express came into being, encouraged and utilized by the postal authorities so that the mails

might more closely knit our Nation into a single unity. The invention of the steam engine made the railroads and steamships a possibility, and notwithstanding the tremendously increased cost, the Post Office Department almost immediately transferred the mails to these faster means of communication.

And finally, when through American ingenuity and invention, the airplane became a reality, it was the postal authorities of this Nation which took the world lead in the experimentation, encouragement, and final usage of the airplane to annihilate distance that more rapid means of intercommunity communication might be a fact.

People's Interest Comes First

Somewhere in the consciousness of the race it seems there has always been the knowledge that someday, by some means, man would conquer the air that he might quickly communicate with his fellow man in far-distant places. The ancients referred to Mercury as the winged messenger of the gods and symbolized him with wings upon his feet. Today that subconscious knowledge of mankind has become a reality. It is a far cry from those ancient days when the runner carried the message of the Battle of Marathon to this twentieth century epoch when it is possible for any citizen of this Nation to reach any point on the earth's surface within 60 hours—only 2½ days. Many of us probably fail to comprehend the full meaning of this.

It is only 160 years since those initial balloon experiments at Paris when Benjamin Franklin was asked by a skeptic as to what good a balloon could be. Franklin's reply, "What good is a newborn baby?" eloquently portrays the great depth of his vision. Franklin thought of the mastery of the air in the terms of balloons, but the "new-born baby"—aeronautics—has now grown up. It has donned long trousers. It is about to reach its majority, its full manhood, its power for good or ill, its maturity. It behooves us now to exercise the same foresight and vision of those early pioneers. Its great strength must be utilized in every possible manner for the good of the people. . . .

No other single branch of government has such an important bearing upon the well-being and contentedness of our civilian population. Speed of communication by personal correspondence with loved ones in distant places is an essential prerequisite of happiness. There should be no premium upon that speed of communication. It should not and must not be necessary to pay a surcharge to hasten the delivery of that important letter. The Postal Service is a service for the people, by the people, and of the people. The general transportation of the mail by the fastest means possible should and must be available to the most humble of our citizens at the same price as all other mail.

Cost Not Sole Criterion

Cost of operation should not be the sole yardstick. Indeed, if we again refer to the history of the Postal Service and appropriations relating to it, we find that *cost of operation has always been secondary to speed of delivery.*

The first railroad was built between Baltimore and Washington in 1828. In the next few years a limited number of miles of railroad track was laid over rights-of-way connecting eastern metropolitan areas. In 1836 Congress seriously considered a huge—for that day—appropriation of funds to be given outright to the railroads to finance their development. The interest from this appropriation was to be designated as the payment to the railroads for carrying the mail. Later, in 1841, when the railroads were in serious financial difficulty, the Postmaster General gave new impetus to this proposal.

For a very brief period Congress limited the payments to railroads for mail transportation to a sum not in excess of 25 per cent more than the cost of transporting the mails over the same routes by stage coaches, but recognizing the value of the more speedy communication by railroad, in 1839 Congress ignored these limitations and permitted payments to increase to a maximum of $300 per mile. This permitted payments by the postal authorities to be increased by from 25 per cent to 300 per cent above that paid for stage coaches.

The railroads continued to expand over the face of the country. In 1857 and 1858 no less than six new railroad routes were established. In addition to encouraging railroad expansion by land grants, rights-of-way and other emoluments, the Federal Government paid these new railroads more than $2,000,000, although the postal revenue amounted to some $300,000. Again, when two new railroad routes were established for transporting the mails in 1865, following the Civil War, while the revenue received was only $24,000, the Government paid to these railroads $750,000.

Congress Pondered in 1845

Congress has always recognized its responsibility to the people with reference to the mails. The Committee on Ways and Means of this House of Representatives, 98 years ago, in 1845, reported:

> *No doubt is entertained as to the obligation of the Government to lay hold of the best and most rapid methods of transmission. It is not without reflection that this committee insists on the principle that it was the duty, as well as the right, of the Government, to avail itself even at heavy additional expense, of the powerful agency of steam for the purpose of accelerating the mails.*

It is no less the duty of Congress today "to avail itself, even at heavy additional expense, of the powerful agency" of airplanes "for the purpose of accelerating the mails." Indeed, today the duty is greater than it was in 1845.

Today the speed with which all mail is transported and delivered has a far greater influence upon the economy of our Nation than it did in 1845. We live in an era when speed is a prerequisite to success. The speediest possible intercommunication between distant points is essential to the greatest economic benefits.

Repeatedly Congress has met its responsibility in connection with advancing the country's interests in postal legislation affecting air mail service. The Civil Aeronautics Act of 1938 declared that all air routes shall be considered as post roads. It further declared that it should be the duty of the Postmaster General to transport mail by air by certificated air carriers, "to the extent required by the Postal Service." It is now the duty of Congress to extend the "requirement of the Postal Service" to include the transmission of all mail by air as speedily as the airplanes can be constructed. It must provide for all necessary new air routes and the redistribution of necessary postal employees, such as those in the Railway Mail Service.

H. R. 1720 Offers the Plan

I have introduced into the House of Representatives H. R. 1720, which directs the Postmaster General to institute air-mail service for all first-class mail and parcel post, without a surcharge for such service, when the use of airplanes for its transportation will speed up delivery of the mail. The present practice of requiring a surcharge for air-mail service lends itself to discrimination against the poor and needy, while the well-to-do have no objection or little objection to it. My bill eliminates this tendency toward discrimination. It places all mail on an equal basis, in accordance with the national policy established more than a century and a half ago—to use the speediest means of transportation for all mail. The bill does not require this transition immediately. It directs this new service be made effective as quickly as possible. It cannot be accomplished overnight. Too many technical problems must be worked out in more or less detail.

During the fiscal year ending June 30, 1942, more than 31,000,000,000 pound-miles of air mail was transported in the United States by domestic air lines. This amounted to only about 5 per cent of the total first-class mail in the United States. To increase the amount of first-class air mail alone to approximately twenty times as much as it was during that fiscal year will require careful planning on the part of the postal authorities, for there can be no interruption in service.

> **It will require the construction and operation of a very large number of new cargo-carrying airplanes, and it will require the construction of hundreds of new airfields throughout the United States. It probably could not be made fully effective for every community until after the end of the present war.**

To carry this program into effect during the postwar period will provide employment for thousands of persons now actively engaged on war work, who will then be seeking new forms of employment. In a community such as the district which I represent in Congress, as well as to almost every other congressional district in the country, this will be a great economic blessing. It will help to insure the economy of our people over the postwar period of transition. But this is only a temporary benefit as compared with the larger and perpetual gains which it will bring.

Oklahoma, situated geographically as it is, will be brought closer to the great metropolitan areas of the east coast and the west coast. The people of Oklahoma and the people of New York and California will understand and appreciate the problems of each other to a greater extent. Air transportation of the mail will bring the towns and cities and farms of Oklahoma, and every other State in the Union, the benefits of closer sociological and eco-

The Author

LYLE H. BOREN, *Democrat, farmer, author, was born near Waxahachie, Tex., May 11, 1909. He was a teacher in Wolf, Okla., 1930-35; with the U. S. Treasury Dept., 1935-36; member of Interstate-Foreign Commerce Committee; member of subcommittees on Oil, Aviation, Securities and Exchange, and Public Health; was the youngest member elected in 1936 to serve in 75th Congress. He is a partner in Boren & Malone Co., office and school supplies, Seminole, Okla.; member of National Executive Council, Boy Scouts of America; Lieutenant Commander, U.S.N.R. Wrote* Evening Bells, Santa Fe Trail, Who Is Who in Oklahoma, Fables in Labels, *and other books.*

nomic ties with the people of the Atlantic and Pacific seaboards. Every county in the State of Oklahoma will have at least one airport where both fast mail planes, as well as other cargo- and passenger-carrying planes, can land and take off. Many small towns and communities in Oklahoma, as well as those of other States, may well develop into important cities through the progress thus insured by air travel and communication. Feeder air-lines into great terminals will bring air service to thousands of smaller communities, particularly cities and towns under 100,000 population, where air service is not now available.* Where these lines intersect the routes of other air-lines, terminals will be established which lend themselves to an ever-growing economy for the community. In the very smallest of these communities, there will probably only be an air pick-up service, but in the larger, these greater benefits will come to all the towns and cities of Oklahoma, and its 47 sister States.

Effect on World Peace Seen

With such a huge volume of mail as is carried in the first-class mails, the tremendous value of such an interlocking network of air routes over the entire country cannot be estimated. The increased cost will be negligible. Even under the present system, military secrecy prevents the American people from at this time knowing the part played by the civilian air transport companies in protecting the United States at the outbreak of this war. But with an air system as extensive as this plan will require, the impregnability of America shall be assured. Thus future wars will be stopped before they have begun.

Had it been possible to have carried this plan of air-mail service into effect six or eight years ago, it is very probable that the present world situation would have been materially changed. Instead of having to wait until we could produce the planes required, we would have had thousands upon thousands of cargo-carrying planes already available to transport troops and supplies to far-distant battlefields on a moment's notice. The bottleneck that has been created by the shortage of steel for the construction of ships to carry materials on the surface of the seas would have been avoided, and a much larger proportion of that steel would have been available for more direct military uses. The greatest insurance we can have against future wars, aside from a huge Army, Navy, and military airforce, is a huge civilian air-transport system in constant use transporting mail.

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* See also *Is Air Transport Forgetting the Small Town in Planning for Future?*, by Harry Stringer, AIR TRANSPORTATION, April, 1943.

Air Cargo Doubled in 1942, Official Statistics Show

A MIRACULOUS performance by the commercial airlines of their wartime job is disclosed in the full 1942 operating results of the domestic air carriers, made public a fortnight ago by Edgar S. Gorrell, president Air Transport Association of America in an official statement:

"With gains shown in all operating departments, the airlines reported the phenomenal increase of more than 108 per cent in the transport of cargo by air—most of which may be attributed to the movements of vital war necessities that tend to remove the bottlenecks in production lines. Air mail came in for an increase of over 55 per cent in pound-miles flown, while revenue passenger-miles were upped some two per cent.

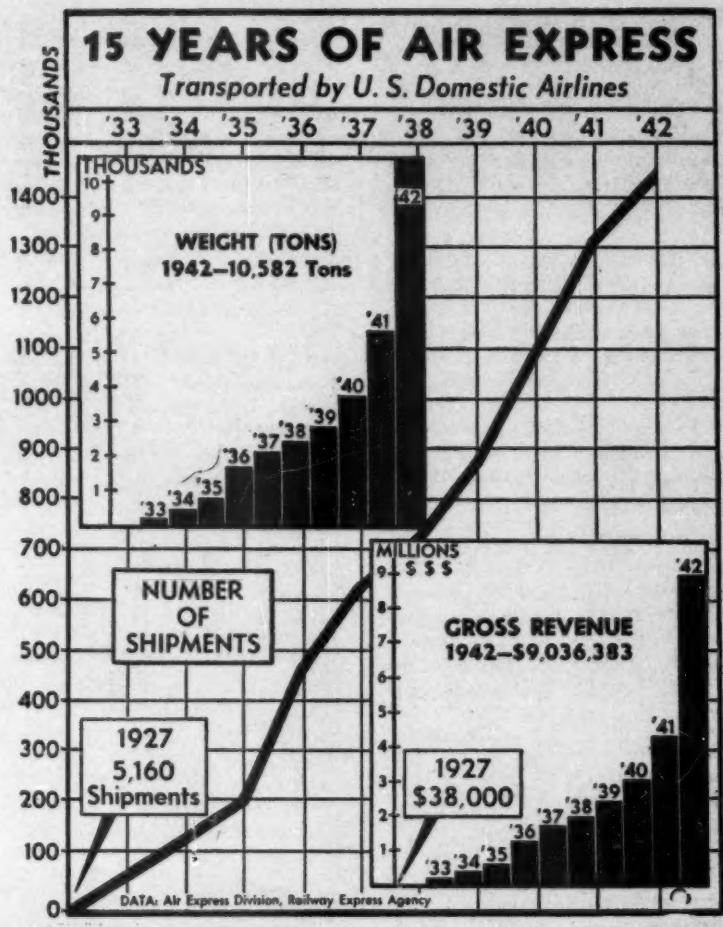
"With just about half of its equipment being operated in military cargo service and the remainder available on a moment's notice for vital war missions, these records were made possible only through the complete utilization by the industry of its entire resources. The commercial airplane that flew 1,200 miles daily before Pearl Harbor now flies more than 1,600 miles, and in many instances over 1,800 miles each day. Load factors are up substantially, with some routes exceeding 90 per cent. All departments are on 24-hour a day schedules.

"Statistics just compiled for the domestic airlines show that 40,101,657 lbs. of air express were carried last year—an all-time high. This compares with 19,209,671 lbs. in 1941—the previous peak—and with 1,230,252 lbs. in 1933—just 10 years ago. Air mail pound-miles flown reached a new high of 40,096,554,805, as against 25,801,137,783 in 1941, with the pieces of air mail carried numbering 463,234,654, compared with 323,135,774. Revenue passenger-miles flown were 1,398,042,146, while the year before the figure was 1,369,584,231.

"To assure adequate air transport vital in the furtherance of the war effort, a comprehensive priority system has been worked out, and about 45 per cent of loads are currently on a priority basis both as regards passengers and cargo (*for more on priorities, see page 18*). On transcontinental routes and routes serving heavy production centers, up to 70 per cent of the transportation is priority, covering both passengers on important war missions and shipments of vital war materials. Space not claimed for priorities is, of course, open to the general public.

"Transportation is not the only wartime job of the commercial airlines. Among other things, shops are open 24-hours a day to service transient military and naval airplanes, to revamp fighter planes, and to perform many other special services. Further, one of the most important contributions, is the Airlines War Training Institute through which thousands of officers and enlisted men to be utilized in the transport work of the Air Transport Command receive specialized training. And, finally, the airlines under contract with the armed forces are engaged in transport services to the principal battlefronts of the world.

"The records show that the airlines have gone to war. They enlisted at the outbreak of the war. They will remain an integral part of the war machine until peace comes."



Increasing use of air express by American industry in the past 15 years is shown in this chart issued by air express division of Railway Express, which handles cargo for the nation's airlines. Figures include cargo flown between 350 airport cities as well as combination rail-air shipments handled to and from 23,000 off-airline offices served by Railway Express. Approximately 35 tons of air express now moves daily.

Current Air Cargo Statistics

United Cargoes Gaining

Air cargoes of 1943 are well on their way to a new record, even over the all-time highs reached in 1942, it was disclosed today in figures of United Air Lines for the first quarter.

United's *Mainliners* flew 847,634 express ton-miles in the first three months of this year for a gain of 16 per cent over the 730,331 ton-miles registered in the first quarter of '42. Air mail ton-miles totaled 2,380,066, for a gain of 99 per cent over the 1,197,635 ton-miles of 1942's first quarter.

C. P. Graddick, United's air cargo director, said that war production shipments passing between major industrial centers on United's coast-to-coast and Pacific Coast system continue to be a major factor in air express gains.

TO Col. Thomas B. Wilson, chairman of the board of Transcontinental & Western Air Inc., now on military leave of absence, who has been promoted to the rank of brigadier general, according to word received from Australia where he is transport chief of the U. S. Army forces.

Gen. Wilson, native of Williamstown, Kans., is a veteran of World War I, having served as a captain in the Signal Corps, out of which had grown the newly created Army Air Corps.

Gen. Wilson became affiliated with TWA in November, 1938. He started as a clerk for the Southern Pacific—and after 15 years rose to chief supervisor of transportation for the entire system. Later he was president of Pacific Greyhound Line. He left that post to become vice president and general manager of Alaska Steamship Co.

TO Dr. John H. Frederick ("Air transportation eventually will be the backbone of the nation's economic structure and will be available at prices all can pay") eminent transportation authority and newly appointed economic consultant to Braniff Airways.

Dr. John Frederick

Considered one of the nation's leading authorities on transportation, Dr. Frederick's name has been closely identified with traffic and marketing for many years. He is a national director of the American Marketing Assn.

In 1927 he was appointed to the post of Instructor of Transportation at Wharton School of Finance and Commerce, and was later elevated to the position of Associate Professor of Marketing. In 1937 he resigned to become editor of *Wholesaler's Salesman.*

After a year of editorial work, he became professor of transportation at the University of Texas. This year his "Air Transportation" is one of the most heavily attended courses on the campus. Author of six texts widely used in various university curricula, Dr. Frederick's latest is *Commercial Air Transportation*, reviewed in the February, 1943, AIR TRANSPORTATION. He will continue his association with the University of Texas while consultant to Braniff.

TO three new United Air Lines' officers: P. M. Willcox, who has served as secretary of the company as well as assistant to the president for the past seven years, has been elected administrative vice-president. He will serve under President W. A. Patterson coordinating various departmental activities. Willcox joined United Air Lines in 1930.

P. M. Willcox

John W. Newey, who became associated with United in January 1942 as assistant to the president in charge of stockholder relations, has been elected finance vice-president. Newey has the background of over 20 years' experience in financial activities.

John W. Newey

S. P. Martin

S. P. Martin, who joined United Air Lines in 1927 and who has served as assistant to the company's operating vice-president since 1941, was elected secretary.

TO Edward Marion Johnson, transport marketing expert and journalist, who will join Delta Air Lines on June 1 as director of planning and research, heading a new department. Johnson, formerly on the staff of Federal Transportation Coordinator Joseph B. Eastman, is manager of the New York Press Assn. and chairman of the department of business management in the school of journalism of Syracuse University.

C. E. Woolman, vice president and general manager of Delta, said Johnson would assist with post-war plans of the airline in Atlanta.

TO Sydney D. Smith, formerly Pan American Airways district traffic manager in San Francisco, who has been appointed division traffic manager of the Alaska Division of Pan American Airways, with headquarters in Seattle, succeeding R. O. Bullwinkel, resigned.

Sydney D. Smith

Before coming to San Francisco, Smith served in the New York district traffic office, and as Chicago district sales manager for Pan Am.

At the same time it is announced that Nicholas Craig, formerly district traffic manager at Seattle, has succeeded Smith as San Francisco district traffic manager. Craig formerly was a Pan American traffic representative in New York and later in Boston.

TO Richard C. du Pont, who resigned as president and chairman of the board of All American Aviation Inc. to become special civilian assistant to the Commanding General of the Army Air Forces where he will have charge of the glider program. He assumes his new duties late in April.

The company announced the election of H. R. Bazley of Pittsburgh to succeed du Pont as president. Mr. Bazley has been vice president of the company in charge of operations. He joined All American in 1939, having been assistant director of aeronautics of the State of Pennsylvania.

Du Pont has been president of All American since it was organized five years ago to operate and develop the Air Mail Pick-up system, by which mail and express are picked up and delivered by airplane non-stop. The company now operates five lines covering 115 cities and towns in Pennsylvania, West Virginia, Ohio, Delaware, New York and Kentucky. It recently completed 2,500,000 miles of flying during which 215,000 pick-ups and deliveries were made without injury to personnel and without serious damage to equipment or cargo.

TO Robert M. Ruddick, new area manager in New York for the air cargo department of United Air Lines.

Ruddick will work closely with air cargo shippers of the New York territory and with the air express division of the Railway Express Agency in connection with the record-breaking volume of air shipments moving between New York and cities throughout the country, most of which are linked with war production.

R. M. Ruddick

Ruddick was for 13 years with the circulation and advertising departments of the Milwaukee *Journal* before joining United Air Lines in March.

TO John P. Gilbert, just named head of the new department of public relations, including advertising, publicity and employe relations, by Northeast Airlines Inc.

Prior to his appointment by Northeast, Gilbert was with R. H. Macy & Co., Montgomery Ward, Batten, Barton, Durstine & Osborn as account executive, General Foods Corp. as associate advertising manager, and with Knight & Gilbert Inc. as vice president and managing director.

John P. Gilbert

AIR-PORTATION NEWS

***THEY'RE WARPLANE-PLANNERS** now, but out of their labors may come much of air cargo's postwar future. At the formation last month of the National Aircraft War Production Council, the previously formed east and west coast councils got together to plan for victory in the air. At the meeting: Rear Admiral R. A. Davison, assistant Navy chief of aeronautics; Glenn L. Martin, president of the National Council, who was east coast council head; LaMotte T. Cohu, board chairman of Northrop Aircraft, Inc. and vice-president of the National Council; Donald W. Douglas, head of Douglas Aircraft and first president of the west coast council.*

French Guiana Gets Daily Air Service

Daily plane service between Miami and Cayenne, capital of strategically-located French Guiana, was inaugurated in mid-April by Pan American Airways with 21-passenger landplanes.

Cayenne, focal point of attention because of conversations between the De Gaulle and Giraud factions over administration of French territories, is added to the list of regular stops on all northbound and southbound services operated with landplanes on Pan Am's east coast Miami-Buenos Aires route.

Previously, *Clippers* of Pan American operating between Miami and Belem, Brazil, stopped once a week at Cayenne. With the newly-announced schedules, seaplane service

southbound can now be terminated at Paramaribo instead of proceeding on as far as Belem, while DC-3 landplanes will be operated daily in both directions between Paramaribo, Cayenne and Belem.

It will now be possible for seaplanes to make a quick turn around at Paramaribo and be back in Port of Spain, Trinidad, the same day as of departure south from there, with return to Miami one day sooner.

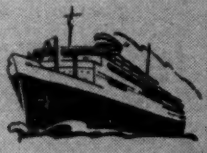
Consular Invoice Not Needed on Brazil Cargo

The Brazilian Government has changed its regulations, according to Pan American Airways' latest information, so that consular invoices are no longer required on air express shipments to Brazil.

All other export documents, however, such as U. S. shipper's export declaration, trademark statements, export licenses (where required) must accompany shipments, Pan Am warns. The present embargo against all shipments not under air transportation priority or U. S. Government bill of lading continues in effect.

CHICKENS FOR EUROPE are prepared for shipment via Pan American Clipper at New York's LaGuardia Field. Baby chicks have long been a big air express item, but now it's different. These chicks, flown to a food-short Allied nation, will mean more chicken for dinner there.

BARR
SERVICE



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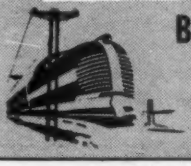

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STILL BIGGER PLANE? Dramatic evidence of the monster size of the Army's great Douglas B-19 is seen in this contrast between the biggest Army plane built up through 1942 and the Army's smallest plane, the tiny Culver. The Culver is still the Army's smallest, but the Army-approved caption to this photo speaks of the B-19 as of the time when it "was the Army's largest plane." If bigger planes are now being built, it points to still greater cargo-carriers soon."

Chicago & Southern Has Eye on Singapore, Via Alaska and Pole

Postwar expansion of passenger and cargo air service on an unprecedented scale was envisioned last month in a sweeping action by Chicago & Southern Air Lines [see map, opposite page].

C&S filed with the Civil Aeronautics Board an application to operate post war trans-Alaskan air service from Chicago to Singapore and Batavia. It had already filed applications to operate from the West Indies to New Orleans.

The application is one of the first of its kind to be filed by a domestic airline and requests authorization for transport of persons and cargo over the Polar Great Circle Route totaling 8,826 nautical miles—1,543 miles shorter than pre-war air service from Chicago to Singapore-Batavia via San Francisco. Astonishingly, no over-water hop will be longer than 480 miles.

Intermediate stops are planned for Winnipeg, Edmonton and Whitehorse, Canada; Fairbanks and Nome, Alaska; Kamenskoe, Nikolaevsk and Vladisvostok, U.S.S.R.; Keijo, Korea; Shanghai and Canton, China; Saigon, French Indo-China.

"An important aspect of the proposed line," said Carleton Putnam, C&S president, "is the fact that the service will contribute to employment of men returning after the war and make use of their experience. Many of our former employees will be familiar with the countries and conditions involved."

To doubting Thomases who might think the application bold indeed for a line of C&S's dimension, Putnam could point to "sufficient trained personnel to supervise the operation of the proposed Great Circle Route, since the line is staffed with navigation and flight ex-

CHICAGO TO JAVA, VIA NOME, is the ambition of up-and-coming Chicago & Southern Air Lines for postwar operation, registered in a formal application to the Civil Aeronautics Board, and strikingly featured last month in full-page newspaper ads. Hard-to-believe fact: This route is 1,543 miles shorter than the pre-Pearl Harbor Chicago-Singapore-Batavia airway via San Francisco, C&S points out.

perts who received most of their experience in the Far East." Capt. Jerome J. Dossat, in charge of the company's celestial navigation school, spent much of his business career in the Far East. Capt. Reed Knight, chief pilot, flew as personal pilot for the Minister of Finance of China and is qualified, holds C&S, to supervise operations across Korea, China, Indo-China and the Malay States into Java. Many more captains and co-pilots have had many hours of experience in flying cargo for the armed services over the Western hemisphere portion of the proposed route.

It was estimated that the route from Chicago to Singapore-Batavia will take approximately 44 hours flying time. By way of comparison, pre-Pearl Harbor air service from Chicago to Singapore-Batavia via San Francisco required 66 hours, over nearly 10,000 miles of open water, while the proposed route lies over only 2,972 miles of intermittent water and 5,854 nautical miles of land. The company proposes to maintain "closed door" operations between intermediate points in foreign countries where there is already established airline service.

America's Aviation Tomorrow

(*Continued from Page* 12)

Board. Except for certain very limited functions necessarily lodged in the State Department, it is most earnestly to be hoped that all matters relating to civil aviation in the postwar period will be carefully centralized in the Civil Aeronautics Board in full accord with the spirit of the policy adopted by Congress in 1938.

* * *

IT would be impossible in the time available this evening to explore all of the ways and means for the best development of America's aviation or to discuss fully the many problems which must be solved. Indeed, I am afraid many of the most important problems are far too prosaic to enlist much interest. I have been impressed by the very considerable discussion appearing in the press, radio and elsewhere in recent weeks concerning such interest-exciting subjects as freedom of the air. But I must confess that much of the discussion relating to postwar aviation, especially in the international field, is quite over my head.

Excerpt from an address of James A. Farley, former Postmaster General, at the dedication of La Guardia Airport, New York, Oct. 15, 1939:

". . . the very existence of these airlines, with their excellent equipment and personnel, is a strong guarantee of the Nation's peace and safety."

No man today can tell very much about the kind of world, politically or economically, we will be living in 10 or twenty years hence, and my slight reading of history leads me to suspect that many of the most important changes in world politics and economics have occurred while people were talking about something else. Moreover, no man can predict today with any particular accuracy what kind of traffic, or in what volume, will be flowing to given points on the earth's surface 10 or 20 years from now. And I venture to say that no man today, however wise he may be can devise a set of abstract principles to be categorically followed in the development of our international aviation or in the negotiations which our Government will have to undertake with other countries.

Our international problems will, I feel sure, be intensely practical. Moreover, their shape will change from day to day. If anyone belives that he can prepare a suit of clothes for our international aviation at this time and expect it to fit tomorrow or the day after, he has much more confidence in his judgment than I have in mine. I suspect that a great many of the issues now being agitated in public discussion and to which it is felt answers must be demanded, and demanded overnight, simply cannot be answered in the abstract, and apart from the specific circumstances which will arise from time to time in the future.

Karl Stefan, Congressman from Nebraska and member of the House Committee on Appropriations, in speaking to William A. M. Burden, Assistant for Aeronautics to the Secretary of Commerce, said of the Civil Aeronautics Administration in its administration of the Federal Airways System and of the traffic over it (p. 125 of the printed hearings of the House Committee on Appropriations, Department of Commerce Appropriation Bill for 1944):

"You are more in the war than the railroads."

And I, for one, suspect that we may very well find in the terms of the present Civil Aeronautics Act, for our country at least, all the answer that can or should be made at this time to some of these issues. However, much

During the debate in the House of Commons in London on Feb. 25, 1942, Mr. Hore-Belisha, war secretary in the Chamberlain government at the outset of the war, declared:

"There is inadequacy of machines of the kind to carry parachute troops, and not enough transport-carrying airplanes."

it may comfort the mind to be certain and precise, I suspect that many of the problems about which we are quite properly concerned are not susceptible of certain and precise answers.

It is extremely important that our nation be prepared to treat with other nations, respecting aviation's future. Certainly we ought never again to approach an international negotiation of aviation matters as ill prepared as we were at the end of the last war, a situation of which I can speak from some personal experience. But in preparing ourselves I hope that we can be as aware, as I am sure are our brother nations, of cold, practical realities, and that we shall not become unduly absorbed in doctrinaire thinking.

Americas' Air Lines Exceed U. S.

The air line network of the other Americas is now two and a half times greater than that of the United States.

Pan Am Starts Flying By Night to Speed War Cargo, Passengers

Aiding war operations by cutting a day off the flying time between the U. S. West Coast and the Canal Zone and other defense centers in Latin America, Pan American Airways last month inaugurated the first night flying in Latin America from Los Angeles to Mexico.

In the new PAA operation, its planes are operating over the first lighted airway in Latin America. Elapsed travel time to the Canal Zone is now two days.

The schedule not only gives the coast an immediate connection with PAA's international southbound planes at Mexico City but also makes direct connections to Tampico and the Gulf Coast cities of Mexico. The route is operated by a PAA affiliate, Cia. Mexicana de Aviacion. Under the new schedule the *California Clipper* will leave Los Angeles for the 1619-mile flight at 10:30 p.m. (PWT) and will arrive at Mexico City at 11:35 a.m. (CST) via the new lighted airway.

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LETTERS *to the Editors*

More on CAB's Historic Air Express Decision

Viewing the recent CAB ruling on air express contracts strictly from an insurance standpoint, I am prompted again to repeat the statement I made in the first issue of AIR TRANSPORTATION (October 1942):

"As air cargo volume grows insurance costs will inevitably go down."

The ruling can have but one possible effect, namely, *an eventual increase in air cargo volume*, not in the immediate future perhaps, only because the major wartime rôle being played by the airlines precludes any elaborate commercial development for the duration.

The ruling unquestionably places the airlines more closely on a competitive basis with surface transportation and thereby opens up the door to tremendous postwar expansion—and consequential reduction in insurance costs."

ROBERT B. LYNCH
Vice President
Riker & Lynch, Inc.
New York, N. Y.

Who Pioneered Big Ships?

I don't want to seem like a contrary wench, but Joan Bradbrooke's article, carried in the February issue, said: "Britain has led the world in two respects in air transport—the first country to put into regular operation four-motor airliners"—and this is not true, according to my aviation files.

In May of 1928, Western Air Lines became the first airline to operate multi-engine cabin transport planes—the Fokker F-10, which revolutionized air transportation. The Fokkers were put into operation on the "million-dollar" model airway between Los Angeles and San Francisco, a route established by Western Air Lines with the aid of a Guggenheim fund. As a result, commercial airline transportation became the luxury passenger service that it is today . . .

MIDGE WINTERS
Director, News Bureau
Western Air Lines Inc.
Los Angeles, Cal.

To sharp-eyed Miss Winters, the Editors' thanks. But, unless their memory is most deceptive, all the Fokkers the Editors ever saw in U. S. commercial service were one- or three-motored craft—not four.

All credit, of course, to long enterprising WAL for pioneering multi-motored flight as long ago as 1928. But as for four-*motored planes—the point made in Miss Bradbrooke's February article—they are hardly commonplace on any domestic U. S. airline today, though international lines like Pan American have long used them.*—ED.

Good Wishes to A.T.

I have enjoyed reading the March issue of AIR TRANSPORTATION and . . . congratulate you on the contribution you are making to our national education on one of the most important coming developments in the field of aviation . . .

BEN D. WOOD
Director
Bureau of Collegiate Educational Research
Columbia College
Columbia University
New York, N. Y.

I was very much interested in reading the latest issue of AIR TRANSPORTATION and I want to compliment you on the splendid presentation you made of the air cargo picture. Your statements in the editorial column that your magazine was not anti-anything but pro-air and that "cargo-by-air will be a mighty force in both domestic and international trade" were particularly significant.

The whole subject of air cargo is certainly one of tremendous scope and it challenges the best thought and imagination of all those connected with our industry. I only hope that we have the ability to meet this problem squarely and to carry on the development of air cargo to the advantage of both the public and the industry.

C. BEDELL MONRO
President
Pennsylvania-Central Airlines
Washington, D. C.

QUICK REFERENCE AIR MAIL TABLE

SINCE World War II has interrupted regular air express schedules to many parts of the world, air mail remains in many cases the only means of rapid shipment. The following table, therefore, will be useful in cases not covered by the main air express schedule tables beginning on the opposite page.

All rates are per half-ounce from U. S. international airports of departure. Due to war conditions, departures (except to Latin America, Canada, Newfoundland and Alaska) are not sufficiently regular to be listed and are likewise items of military secrecy.

Air mail to Canada and Alaska moves at the usual domestic rate of six cents per ounce.

Aden 70c	Ethiopia 70c	Northern Ireland 30c
Afghanistan 70c	France (Unoccupied) 30c	Northern Rhodesia 60c
Algeria 33c	French Cameroons 60c	Nyasaland 60c
Anglo-Egyptian Sudan .. 70c	French Equatorial Africa. 60c	Palestine 70c
Angola 60c	French Guiana 30c	Panama 15c
Anguilla 15c	French Guinea 50c	Paraguay 40c
Antigua 15c	French Somaliland 70c	Peru 30c
Argentina 40c	French Sudan 50c	Portugal 30c
Aruba 25c	French Togoland 45c	Portuguese East Africa .. 60c
Azores 30c	Gambia 50c	Puerto Rico 10c
Bahamas 10c	Gibraltar 30c	Redonda 15c
Bahrein Islands 70c	Gold Coast Colony 50c	Rio de Oro 40c
Baluchistan 70c	Grenada 15c	Saba 10c
Barbados 25c	Grenadines 15c	St. Christopher 15c
Barbuda 15c	Guadeloupe 15c	St. Eustatius 10c
Belgian Congo 60c	Guatemala 12c	St. Kitts 15c
Bermuda 10c	Haiti 10c	St. Lucia 15c
Bolivia 35c	Hawaii 20c	St. Martin 10c
Bonaire 25c	Honduras (Rep.) 12c	St. Vincent 15c
Brazil 40c	Iceland 30c	Salvador (El) 12c
British Cameroons 60c	India 70c	Saudi Arabia 70c
British Guiana 30c	Iran 70c	Scotland 30c
British Honduras 20c	Iraq 70c	Senegal 45c
British Somaliland 70c	Ireland 30c	Sierra Leone 50c
British Virgin Islands .. 10c	Italian Somaliland 70c	Southern Rhodesia 60c
Brunei 70c	Ivory Coast 50c	Southwest Africa 60c
Canal Zone 15c	Jamaica 10c	Spain 30c
Canary Islands 40c	Kenya 60c	Spanish Guinea 50c
Cape Verde Islands 55c	Lebanon (Rep.) 70c	Surinam 30c
Ceylon 70c	Liberia 50c	Sweden 30c
Chile 40c	Libya 70c	Switzerland 30c
China (Unoccupied) 70c	Madagascar 60c	Syria 70c
Colombia 35c	Malta 70c	Tanganyika 60c
Costa Rica 15c	Martinique 15c	Trans-Jordan 70c
Cuba 10c	Mauritania 45c	Trinidad 15c
Curacao 25c	Mauritius 60c	Tunisia 33c
Cyprus 70c	Mexico 10c	Turkey 70c
Dahomey 45c	Montserrat 15c	Uganda 60c
Dominica 15c	Morocco 33c	Union of South Africa .. 60c
Dominican Republic 10c	Mozambique 60c	Uruguay 40c
Ecuador 30c	Nevis 15c	Vatican City State 30c
Egypt 70c	Newfoundland 15c	Venezuela 25c
England and Wales 30c	Nicaragua 12c	Virgin Islands (U. S.) .. 10c
Eritrea 70c	Niger 45c	Zanzibar (Incl. Pemba) .. 60c
	Nigeria 50c	

STEAMSHIP TO CAPETOWN THENCE BY AIR

(The air fee PER HALF OUNCE is in addition to regular postage)

Aden 20c	Ethiopia 20c	Saudi Arabia 20c
Anglo Egyptian Sudan. 15c	French Somaliland 20c	Southern Rhodesia 5c
Angola 5c	Italian Somaliland 20c	Tanganyika 10c
*Belgian Congo 14c	Kenya 10c	Turkey 20c
British Somaliland 20c	Libya 20c	Uganda 10c
Egypt 20c	Malta 20c	Zanzibar (Incl. Pemba) .. 10c
Eritrea 20c	Northern Rhodesia 5c	

*Steamer to Bomba (or Matadi), thence by air, 9 cents per half ounce in addition to regular postage.

International Express and Mail Tables

Express rates quoted are from the U. S. international airport of departure and are based on the latest prevailing tariffs. Shippers are warned, however, that they are subject to change.

Bro—Brownsville, Tex.
Cg—Chicago
Cub—Cut Bank, Mont.
Eo—El Paso
Fv—Fort Worth
Gf—Grand Forks, N. D.
Lgs—Los Angeles
Mia—Miami
Nyk—New York
Sq—San Diego
Ste—Seattle

International Air Express is subject to two charges: one a charge per pound weight or measurements at carrier's option (200 cu. in. to the pound of weight), the other a charge per $100 of valuation. The two must be added on any shipment to determine the cost. Neither includes insurance, which may be purchased by the shipper from the carrier or otherwise.

Priorities: The air carriers warn all shippers that express traffic, both U. S. Government and commercial, is so heavy that no guarantee can be given that any shipment will depart on any particular plane unless it enjoys U. S. priority. Otherwise it will depart, in relation to other shipments, in the order received at the international airport used, subject to wartime limitations. Shippers should forward cargo to international airports as far in advance of desired departure as possible and should communicate **via Railway Express Agency, Inc.** with the international air carrier as to whether the shipment can be forwarded without priority, as shipments without priority for certain countries are, at present, under embargo. (On cargoes to be shipped via American Export Airlines, Inc., shippers should inquire at their office, Room 920, 25 Broadway, New York.)

International air carriers whose schedules and rates are included here are indicated by the letter following the symbol for the airport:

A—American Airlines.
C—Colonial Air Lines.
E—American Export Airlines.
NW—Northwest Airlines, Inc.
P—Pan American Airways System and affiliates.
T—Trans-Canada Air Lines.
U—United Air Lines.
W—Western Air Lines

LATIN-AMERICA LINES

Destination	U. S. Gateway & Airline	RATES Per Lb.	RATES Per $100 Value	Depart	Mail per ½ Oz.
Antilla, Cuba	Mia P	.24	.25	Dly	.10
Antofagasta, Chile	Mia P	1.26	.50	M,W,Th,F, Sa	.40
"	Bro P	1.34	.50	Tu,W,Th,F, Su	.40
"	Lgs P	1.95	.50	M,Tu,W,Th, F,Sa	.40
Aracaju, Brazil	Mia P	1.26	.50	Su, W	.40
"	Bro P	1.71	.50	M,F	.40
"	Lgs P	2.28	.65	Su,Th	.40
Areia Branca, Brazil	Mia P	1.24	.50	Su	.40
"	Bro P	1.56	.50	F	.40
"	Lgs P	2.13	.50	Th	.40
Arequipa, Peru	Mia P	1.23	.50	Dly	.30
"	Bro P	1.26	.50	Dly	.30
"	Lgs P	1.93	.50	Dly	.30
Arica, Chile	Mia P	1.25	.50	M,W,Th,Sa	.40
"	Bro P	1.26	.50	Tu,W,Th,F, Su	.40
"	Lgs P	1.94	.50	M,Tu,W,Th, Sa	.40
Asuncion, Para	Mia P	1.73	.50	Su,F	.40
"	Bro P	1.86	.50	W,F	.40
"	Lgs P	2.43	.65	Tu,Th	.40
Bahia, Brazil (*See Sao Salvador*)					
Balboa, Canal Zone	Mia P	.76	.40	Dly	.15
"	Bro P	.90	.40	Dly	.15
"	Lgs P	1.45	.50	Dly	.15
Baracoa, Cuba	Mia P	.28	.25	Dly ex Sa	.10
Barcelona, Venezuela	Mia P	.85	.40	Dly	.25
"	Bro P	1.17	.50	Dly	.25
"	Lgs P	1.78	.50	Dly	.25
Barranquilla, Colombia via Kingston	Mia P	.61	.40	Su,Tu,W,F	.35
via Balboa	Bro P	1.03	.40	Dly	.35
"	Lgs P	1.59	.50	Dly	.35
Bauru, Brazil	Mia P	1.58	.50	Su	.40
"	Bro P	1.71	.50	F	.40
"	Lgs P	2.28	.65	Th	.40
Belem, Brazil (*See Para*)					

Destination	U. S. Gateway & Airline	RATES Per Lb.	RATES Per $100 Value	Depart	Mail per ½ Oz.
Bello-Horizonte, Brazil	Mia P	1.65	.50	Su,M,W,F	.40
"	Bro P	2.13	.50	M,W,F,Su	.40
"	Lgs P	2.69	.65	Su,Tu,Th,F	.40
Buenos Aires, Argentina	Mia P	1.56	.50	Dly	.40
"	Bro P	1.70	.50	Dly	.40
"	Lgs P	2.26	.65	Dly	.40
Cali, Col. via Balboa	Mia P	.89	.40	Dly	.35
"	Bro P	1.03	.40	Dly	.35
"	Lgs P	1.59	.50	Dly	.35
Camaguey, Cuba	Mia P	.26	.25	Dly	.10
Camocim, Brazil	Mia P	1.22	.50	.....	.40
"	Bro P	1.50	.50	.....	.40
"	Lgs P	2.05	.50	.....	.40
Campeche, Mexico	Mia P	.41	.25	Su,W,F	.10
"	Bro P	.51	.40	Dly	.10
"	Lgs P	1.00	.40	Dly	.10
Campo Grande, Brazil	Mia P	1.48	.50	Su,F	.40
"	Bro P	1.61	.50	W,F	.40
"	Lgs P	2.18	.50	Tu,Th	.40
Canavieiras, Brazil	Mia P	1.33	.50	Su,W	.40
"	Bro P	1.81	.50	M,F	.40
"	Lgs P	2.38	.65	Su,Th	.40
Caracas, Venezuela (*See La Guaira*)	.....	.....	.....	.....	...
Caravellas, Brazil	Mia P	1.36	.50	Su,W	.40
"	Bro P	1.85	.50	M,F	.40
"	Lgs P	2.41	.65	Su,Th	.40
Cayenne, Fr. Guiana	Mia P	1.02	.40	Dly	.30
"	Bro P	1.26	.50	Th	.30
"	Lgs P	1.91	.50	W	.30
Cayo Mambi, Cuba	Mia P	.26	.25	Dly ex Sa	.10
Chetumal, Mexico	Mia P	.55	.40	W,F	.10
"	Bro P	.55	.40	Su,Th	.10
"	Lgs P	1.04	.40	W,Sa	.10
Chiclayo, Peru	Mia P	1.11	.50	Dly	.30
"	Bro P	1.19	.50	Dly	.30
"	Lgs P	1.81	.50	Dly	.30
Cienfuegos, Cuba	Mia P	.28	.18	Su,Tu,F	.10
C. del Carmen, Mexico	Mia P	.45	.25	Su,W,F	.10
"	Bro P	.47	.40	Dly	.10
"	Lgs P	.94	.40	Dly	.10
Ciudad Trujillo, D. R.	Mia P	.45	.25	Dly	.10
Cochabamba, Bolivia	Mia P	1.26	.50	W,Sa	.35
"	Bro P	1.35	.50	Tu,F	.35
"	Lgs P	1.95	.50	M,Th	.35
Concepcion, Bolivia	Mia P	1.31	.50	Sa	.35
"	Bro P	1.45	.50	F	.35
"	Lgs P	2.03	.50	Th	.35
Cordoba, Argentina	Mia P	1.49	.50	Dly	.40
"	Bro P	1.63	.50	Dly	.40
"	Lgs P	2.19	.50	Dly	.40
Coro, Venezuela (via Barranquilla)	Mia P	.74	.40	Su,Tu	.25
"	Bro P	1.11	.50	Dly	.25
"	Lgs P	1.69	.50	Dly	.25
Coro, Venezuela (via Maracaibo)	Mia P	.74	.40	M,W,F	.25
Corumba, Brazil	Mia P	1.41	.50	Su,W,F,Sa	.40
"	Bro P	1.56	.50	M,Th	.40
"	Lgs P	2.13	.50	S,W	.40
Cristobal, Canal Zone	Mia P	.76	.40	Dly	.15
"	Bro P	.92	.40	Dly	.15
"	Lgs P	1.46	.50	Dly	.15
Cuenca, Ecuador	Mia P	1.06	.40	Su,W,F	.30
"	Bro P	1.15	.50	Tu,Th,Sa	.30
"	Lgs P	1.76	.50	M,W,F	.30
Curityba, Brazil (Via Rio)	Mia P	1.60	.50	Su,W,F	.40
"	Bro P	2.00	.50	M,W,F	.40
"	Lgs P	2.58	.65	Su,Tu,Th	.40
David, Panama	Mia P	.82	.40	Dly	.15
"	Bro P	.85	.40	Dly	.15
"	Lgs P	1.38	.50	Dly	.15
Esmeraldas, Ecuador	Mia P	.99	.40	Tu	.30
"	Bro P	1.11	.50	M	.30
"	Lgs P	1.71	.50	Su	.30
Florianopolis, Brazil	Mia P	1.63	.50	Su,M,F	.40
"	Bro P	2.11	.50	W,F,Sa	.40
"	Lgs P	2.68	.65	Tu,Th,F	.40

Destination	U. S. Gateway & Airline	RATES Per Lb.	RATES Per $100 Value	Depart	Mail per ½ Oz.
Fort de France, Martinique	Mia P	.71	.40	Sa	.15
"	Bro P	1.16	.50	Su	.15
"	Lgs P	1.78	.50	Sa	.15
Fortaleza, Brazil (Ceara)	Mia P	1.23	.50	Su,M,Tu,W,Th,Sa	.40
"	Bro P	1.54	.50	Su,M,Tu,Th,F,Sa	.40
"	Lgs P	2.10	.50	M,W,Th,F,Sa	.40
Georgetown, British Guiana	Mia P	.90	.40	Dly	.30
"	Bro P	1.24	.50	Dly	.30
"	Lgs P	1.88	.50	Dly	.30
Guadalajara, Mexico	Bro P	.43	.25	Dly	.10
"	Lgs P	.59	.40	Dly	.10
Guantanamo, Cuba	Mia P	.28	.25	Dly	.10
Guatemala City, Gua	Mia P	.74	.40	Dly	.12
"	Bro P	.53	.40	Dly	.12
"	Lgs P	1.08	.50	Dly	.12
Guayaquil, Ecuador	Mia P	1.04	.40	Dly	.30
"	Bro P	1.15	.50	Dly	.30
"	Lgs P	1.75	.50	Dly	.30
Havana, Cuba	Mia P	.20	.18	Dly	.10
Hermosillo, Mexico	Bro P	.77	.40	Dly	.10
"	Lgs P	.24	.25	Dly	.10
Iguassu Falls, Brazil	Mia P	1.69	.50	Su,F	.40
"	Bro P	1.91	.50	W,F	.40
"	Lgs P	2.48	.65	Tu,Th	.40
Ixtepec, Mexico	Mia P	.76	.40	Su,W,F	.10
"	Bro P	.41	.25	Su,M,Tu,W,Th,F	.10
"	Lgs P	.89	.40	Su,M,Tu,W,Th,Sa	.10
Joao Pessoa, Brazil (Cabedello)	Mia P	1.25	.50	W	.40
"	Bro P	1.64	.50	M	.40
"	Lgs P	2.20	.50	Su	.40
Kingston, Jamaica	Mia P	.39	.25	Su,Tu,W,F	.10
La Guaira, Venezuela	Mia P	.81	.40	M,W,F,Sa	.25
"	Bro P	1.15	.50	Dly	.25
"	Lgs P	1.75	.50	Dly	.25
La Paz, Bolivia	Mia P	1.25	.50	Su,Tu,W,Sa	.35
"	Bro P	1.30	.50	M,Tu,F,Sa	.35
"	Lgs P	1.95	.50	Su,M,Th,F	.35
Lima, Peru	Mia P	1.18	.50	Dly	.30
"	Bro P	1.24	.50	Dly	.30
"	Lgs P	1.88	.50	Dly	.30
Loja, Ecuador	Mia P	1.08	.50	Su,W,F	.30
"	Bro P	1.17	.50	Tu,Th,Sa	.30
"	Lgs P	1.78	.50	M,W,F	.30
Maceio, Brazil	Mia P	1.26	.50	Su,M,Tu,W,Th,Sa	.40
"	Bro P	1.68	.50	Su,M,Tu,Th,F,Sa	.40
"	Lgs P	2.24	.50	M,W,Th,F,Sa	.40
Managua, Nicaragua	Mia P	.86	.40	Dly	.12
"	Bro P	.71	.40	Dly	.12
"	Lgs P	1.22	.50	Dly	.12
Manaos, Brazil	Mia P	1.24	.50	Su,W	.40
"	Bro P	1.56	.50	M,F	.40
"	Lgs P	2.13	.50	Su,Th	.40
Manta, Ecuador	Mia P	1.03	.40	Th,Sa	.30
"	Bro P	1.14	.50	W,F	.30
"	Lgs P	1.74	.50	Tu,Th	.30
Manzanillo, Cuba	Mia P	.26	.25	Dly ex Su	.10
Maracaibo, Venezuela (via Barranquilla)	Mia P	.69	.40	Su,Tu	.25
"	Bro P	1.08	.50	Dly	.25
"	Lgs P	1.66	.50	Dly	.25
Maracaibo, Venezuela (via La Guaira)	Mia P	.69	.40	Tu,Sa	.25
Maturin, Venezuela	Mia P	.89	.40	Dly	.25
"	Bro P	1.19	.50	Dly	.25
"	Lgs P	1.80	.50	Dly	.25
Mazatlan, Mexico	Bro P	.57	.40	Dly	.10
"	Lgs P	.45	.25	Dly	.10
Medellin, Columbia (via Boquilla)	Mia P	1.06	.40	Su,W,F	.35

Destination	U. S. Gateway & Airline	RATES		Depart	Mail per ½ Oz.
		Per Lb.	Per $100 Value		
Medellin, Columbia (via Balboa)	Mia P	1.06	.40	Tu,Sa	.35
"	Bro P	1.10	.50	M,Th,F	.35
"	Lga P	1.65	.50	Su,W,Th	.35
Mendoza, Argentina	Mia P	1.41	.50	M,W,Th,Sa	.40
"	Bro P	1.55	.50	Su,Tu,W,F	.40
"	Lga P	2.11	.50	M,Tu,Th,Sa	.40
Merida, Mexico	Mia P	.37	.25	Su,W,F	.10
"	Bro P	.55	.40	Dly	.10
"	Lga P	1.04	.40	Dly	.10
Mexicali, Mexico	Lga P	.20	.18	Dly	.10
Mexico City, Mexico	Mia P	.64	.40	Su,W,F	.10
"	Bro P	.26	.25	Dly	.10
"	Lga P	.69	.40	Dly	.10
"	Lga A	.70	.35	Dly	.10
"	Fv A	.42	.25	Dly	.10
"	Eo A	.42	.25	Dly	.10
"	Sq A	.74	.35	Dly	.10
Minatitlan, Mexico	Mia P	.53	.40	Su,W,F	.10
"	Bro P	.39	.25	Dly	.10
"	Lga P	.86	.40	Dly	.10
Monterrey, Mexico	Fv A	.34	.25	Dly	.10
"	Eo A	.34	.25	Dly	.10
"	Lga A	.62	.35	Dly	.10
"	Sq. A	.74	.35	Dly	.10
Montevideo, Uruguay* (See notes below)	.....	.....	.....	.....	...
Nassau, Bahamas	Mia P	.20	.18	Dly ex Su,W	.10
Natal, Brazil	Mia P	1.25	.50	Su,M,Tu,W, Th,Sa	.40
"	Bro P	1.61	.50	Su,M,Tu,Th, F,Sa	.40
"	Lga P	2.18	.50	Su,M,W,Th, F,Sa	.40
Oaxaca, Mexico	Mia P	.73	.40	Su,W,F	.10
"	Bro P	.35	.25	Su,Tu,Th	10
"	Lga P	.81	.40	Su,Tu,Th	.10
Oruro, Bolivia	Mia P	1.26	.50	Su,Tu,W,Sa	.35
"	Bro P	1.33	.50	M,Tu,F,Sa	.35
"	Lga P	1.95	.50	Su,M,Th,F	.35
Panama City, Panama (*See Balboa, C. Z.*)	.....	.....	.....	.....	...
Para (Belem), Brazil	Mia P	1.13	.50	Dly	.40
"	Bro P	1.34	.50	Dly	.40
"	Lga P	1.95	.50	Dly	.40
Paramaribo, Sur	Mia P	.97	.40	Dly	.30
"	Bro P	1.25	.50	Dly	.30
"	Lga P	1.90	.50	Dly	.30
Parnahyba, Brazil	Mia P	1.21	.50	Su,W	.40
"	Bro P	1.48	.50	M,F	.40
"	Lga P	2.04	.50	Su,Th	.40
Point a Pitre, Guadeloupe	Mia P	.66	.40	Sa	.15
"	Bro P	1.14	.50	Su	.15
"	Lga P	1.74	.50	Sa	.15
Port au Prince, Haiti	Mia P	.37	.25	Dly	.10
Port of Spain, Trinidad	Mia P	.79	.40	Dly	.15
"	Bro P	1.20	.50	Dly	.15
"	Lga P	1.81	.50	Dly	.15
Porto Alegre, Brazil	Mia P	1.70	.50	Su,M,W,F	.40
"	Bro P	2.19	.50	M,W,F,Sa	.40
"	Lga P	2.75	.65	Su,Tu,Th,F	.40
Puerto Suarez, Bolivia	Mia P	1.41	.50	W,Sa	.35
"	Bro P	1.56	.50	Tu,F	.35
"	Lga P	2.13	.50	M,Th	35
Preston, Cuba	Mia P	.24	.25	Dly ex Sa	.10
Quito, Ecuador	Mia P	.97	.40	Dly	.30
"	Bro P	1.09	.50	Dly	.30
"	Lga P	1.68	.50	Dly	.30
Recife (Pernambuco), Brazil	Mia P	1.26	.50	Su,M,Tu,W, Th,Sa	.40
"	Bro P	1.65	.50	Su,M,Tu,W, Th,Sa	.40
"	Lga P	2.21	.50	Su,M,Tu,W, Th,F,Sa	.40
Rio de Janeiro	Mia P	1.50	.50	Su,M,W,F	.40
"	Bro P	1.98	.50	M,W,F,Sa	.40
"	Lga P	2.54	.65	Su,Tu,Th,F	.40
Robore, Bolivia	Mia P	1.38	.50	Sa	.35
"	Bro P	1.51	.50	F	.35
"	Lga P	2.08	.50	Th	.35
Salinas, Ecuador	Mia P	1.05	.40	Th,Sa	.30
"	Bro P	1.15	.50	W,F	.30
"	Lga P	1.75	.50	Tu,Th	.30
Salta, Argentina	Mia P	1.30	.50	Su,Tu,F	.40
"	Bro P	1.45	.50	M,Th,Sa	.40
"	Lga P	2.03	.50	Su,W,F	.40
San Ignacio, Bolivia	Mia P	1.33	.50	Sa	.35
"	Bro P	1.48	.50	F	.35
"	Lga P	2.04	.50	Th	.35
San Jose, Bolivia	Mia P	1.35	.50	Sa	.35
"	Bro P	1.50	.50	F	.35
"	Lga P	2.08	.50	Th	.35
San Jose, Costa Rica	Mia P	.89	.40	Dly	.15
"	Bro P	.76	.40	Dly	.15
"	Lga P	1.31	.50	Dly	.15
San Juan, Puerto Rico	Mia P	.53	.40	Dly	.10
San Salvador, El Salvador	Mia P	.79	.40	Dly	.12
"	Bro P	.61	.40	Dly	.12
"	Lga P	1.14	.50	Dly	.12
Santa Cruz, Bolivia	Mia P	1.28	.50	W,Sa	.35
"	Bro P	1.43	.50	Tu,F	.35
"	Lga P	1.99	.50	M,Th	.35
Santiago, Chile	Mia P	1.38	.50	M,W,Th,Sa	.40
"	Bro P	1.51	.50	Su,Tu,W,F	.40
"	Lga P	2.08	.50	M,Tu,Th,Sa	.40
Santiago, Cuba	Mia P	.26	.25	Dly	.10
Sao Luiz, Brazil	Mia P	1.19	.50	Su,M,Tu,W, Th,Sa	.40
"	Bro P	1.43	.50	Su,M,Tu,Th, F,Sa	.40
"	Lga P	1.99	.50	Su,M,W,Th, F,Sa	.40
Sao Paulo, Brazil (via Rio)	Mia P	1.55	.50	Su,M,W,F	.40
"	Bro P	2.04	.50	M,W,F,Sa	.40
"	Lga P	2.60	.65	Su,Tu,Th,F	.40
Sao Salvador, Brazil (Bahia)	Mia P	1.28	.50	Su,M,Tu,W, Th,Sa	.40
"	Bro P	1.76	.50	Su,M,Tu,Th, F,Sa	.40
"	Lga P	2.33	.65	Su,M,W,Th, F,Sa	.40
St. Johns, Antigua, British West Indies	Mia P	.64	.40	Su,M,W,F,Sa	.15
"	Bro P	1.13	.50	Su,M,W,F,Sa	.15
"	Lga P	1.73	.50	Su,Tu,Th,Sa	.15
St. Thomas, V. I.	Mia P	.57	.40	Sa	.10
"	Bro P	1.10	.50	Su	.10
"	Lga P	1.68	.50	Sa	.10
Talara, Peru	Mia P	1.08	.50	Dly	.30
"	Bro P	1.17	.50	Dly	.30
"	Lga P	1.79	.50	Dly	.30
Tampico, Mexico	Bro P	.20	.18	Dly	.10
"	Lga P	.81	.40	Dly	.10
Tapachula, Mexico	Mia P	.74	.40	Su,W,F	.10
"	Bro P	.53	.40	Dly	.10
"	Lga P	1.02	.40	Dly	.10
Tegucigalpa, Honduras	Mia P	.82	.40	Dly	.12
"	Bro P	.68	.40	Dly	.12
"	Lga P	1.18	.50	Dly	.12
Tres Lagoas, Brazil	Mia P	1.53	.50	Su	.40
"	Bro P	1.66	.50	F	.40
"	Lga P	2.23	.50	Th	.40
Tucuman, Argentina	Mia P	1.34	.50	Su,Tu,F	.40
"	Bro P	1.49	.50	M,Th,Sa	.40
"	Lga P	2.05	.50	Su,W,F	.40
Turbo, Columbia (via Barranquilla)	Mia P	1.06	.40	Su,Tu,W,F	.35
Turbo, Columbia (via Balboa, C. Z.)	Mia P	1.06	.40	Sa	.35
"	Bro P	1.10	.50	M,Th,F	.35
"	Lga P	1.65	.50	Su,W,Th	.35
Tuxpan, Mexico	Bro P	.20	.18	Dly	.10
"	Lga P	.83	.40	Dly	.10

* Shipments for Montevideo must be assessed rates to Buenos Aires plus 55c per 2 lbs. or fraction thereof (min. 55c) for forwarding by other carrier to Montevideo, plus $1.10 per shipment transfer charge at Buenos Aires.

Destination	U. S. Gateway & Airline	RATES Per Lb.	RATES Per $100 Value	Depart	Mail per ½ Oz.
Tuxtla,Gutierrez,Mexico	Mia P	.81	.40	Su,W,F	.10
"	Bro P	.45	.25	Su,Tu,Th	.10
"	Lgs P	.93	.40	Su,Tu,Th	.10
Uyuni, Bolivia	Mia P	1.26	.50	Su,Tu	35
"	Bro P	1.38	.50	M,Sa	35
"	Lgs P	1.95	.50	Su,F	35
Veracruz, Mexico	Mia P	.57	.40	Su,W,F	.10
"	Bro P	.33	.25	Dly	10
"	Lgs P	.79	.40	Dly	10
Victoria, Brasil	Mia P	1.41	50	Su,W	.40
"	Bro P	1.90	50	M,F	.40
"	Lgs P	2.46	.65	Su,Th	.40
Villahermosa, Mexico	Mia P	.49	.40	Su,W,F	.10
"	Bro P	.43	.25	Dly	.10
"	Lgs P	.90	.40	Dly	.10

ATLANTIC LINES

Botwood, Newfoundland	Nyk P	.81	.40	Twice wk	.15
England via Foynes*	Nyk E	(Rates on Application)			.30
" "	Nyk P	(Rates on Application)			.30
Foynes, Eire	Nyk P	1.78	.50	Twice wk	.30
"	Nyk E	2.00	.50		.30
Hamilton, Bermuda	Nyk P	.55	.25	Twice wk	.10
"	Nyk E	.55	.25		.10
Horta, Azores	Nyk P	1.70	.40	Once 2 wks	.30
Lisbon, Portugal	Nyk P	2.00	.50	Once 2 wks	.30
Scotland via Foynes*	Nyk E	(Rates on Application)			.30
" "	Nyk P	(Rates on Application)			.30
Shediac, N. B	Nyk P	.51	.25	Twice wk	.06
Wales via Foynes*	Nyk E	(Rates on Application)			.30
" "	Nyk P	(Rates on Application)			.30

ALASKA LINES

Bethel, Alaska	Ste P	1.11	40	Schedules not published	.06
Fairbanks, "	Ste P	.90	40	"	.06
Flat, "	Ste P	1.05	.40	"	.06
Galena, "	Ste P	1.00	40	"	.06
Golovin, "	Ste P	1.08	.40	Nov. 1-Apr. 30	.06
Hot Springs, "	Ste P	.92	.40	Nov. 1-Apr. 30	.06
Juneau, "	Ste P	.56	.25	Schedules not published	.06
McGrath, "	Ste P	1.00	.40	"	.06
Nome, "	Ste P	1.11	.40	"	.06
Nulato, "	Ste P	1.03	.40	Nov. 1-Apr. 30	.06
Ophir, "	Ste P	1.03	.40	Schedules not published	.06
Ruby, "	Ste P	.99	.40	"	.06
Tanana, "	Ste P	.95	.40	Nov. 1-Apr. 30	.06
Whitehorse, Canada	Ste P	.66	40	Schedules not published	.06

CANADIAN LINES

Calgary, Alb.	Nyk T	1.02	†	Dly	.06
Edmonton, Alb.	Nyk T	1.06	†	Dly	.06
Halifax, N. S.	Nyk T	.31	†	Dly	.06
Lethbridge, Alb.	Nyk T	.44	†	Dly	.06
" "	CubW	.04	†	Dly	.06
London, Ont.	Nyk T	.22	†	Dly	.06
Montreal, Que.	Nyk C	.12	†	Dly	.06
"	Nyk T	.12	†	Dly	.06
North Bay, Ont.	Nyk T	.27	†	Dly	.06
Ottawa, Ont.	Nyk T	.18	†	Dly	.06
Regina, Sask.	Nyk T	.76	†	Dly	.06
St. John, N. B.	Nyk T	.31	†	Dly	.06
St. Johns, N. F.	Nyk T	.55	†	Dly	.06
Sydney, N. S.	Nyk T	.36	†	Dly	.06
Toronto, Ont.	Nyk A	.16	†	Dly	.06
"	Nyk T	.16	†	Dly	.06
Vancouver, B. C.	Ste U	.08	†	Dly	.06
"	Nyk T	.56	†	Dly	.06
Windsor, Ont.	Nyk A	.20	†	Dly	.06
"	Cg A	.12	†	Dly	.06
"	Nyk T	.20	†	Dly	.06
Winnipeg, Man.	GfNW	.04	†	Dly	.06
"	Nyk T	.60	†	Dly	.06

* British Overseas Airways Corp. carries from Foynes, Ireland to destinations in England, Scotland, and Wales.

† Canadian air express is carried on the same basis as air express within the U. S.: $50 declared value free; excess charged at 10 cents per $100 or fraction thereof.

NOTE: The per pound rate shown in this column is based on the average package weighing 25 lbs., i.e.: A 1 lb. package from New York to Ontario would cost $1—25 lbs. $4. Average cost per pound: 16 cents.

Planes flying in and out of Miami are operated by Transportes Aereos Centro Americanos (TACA), British West Indian Airways (BWIA), Royal Dutch Airlines (KLM).

These companies operate planes on a non-scheduled basis, mainly under charter, for the transportation of personnel and equipment in the interest of hemisphere defense. It is reported that each flight by these companies is by special permit from the Civil Aeronautics Board and that their planes now carry no commercial passengers, express or cargo shipments.

Nicaro Corp., subsidiary of Freeport Sulphur Co., is operating its own plane to transport equipment and personnel between Miami and Antilla, Cuba, where it has under construction a large plant for production of nickel for the U. S. Government.

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About This Issue

With this issue, AIR TRANSPORTATION, at the ripe age of eight months, marks not one but several milestones of progress. With that due sense of modesty which becomes all beginners, we point with pride to some of them.

First, if you've read the story in the center spread and pulled out the map that's spread over four full pages, you've probably shared the thrill we got when we rediscovered the airship. The dirigible, of course, is a type of aircraft that flew even before the Wright Brothers. But you haven't read much about it anywhere for a long time. In this issue, thanks to the generous cooperation of P. W. LITCHFIELD, Goodyear's distinguished head, we are able to bring you pretty well up to date. You who are shippers and potential shippers of CARGO-BY-AIR will find in it a lot of excellent food for thought.

Frankly, we're just as proud of the story that leads off this May issue—the address of COLONEL EDGAR S. GORRELL which you are reading in these pages at just about the exact time it is being heard by the members of the Foreign Commerce Club of New York, at Manhattan's Hotel Astor. We're indebted to COLONEL GORRELL—and deeply—for making it possible for us to bring you his timely thought so promptly.

Then, from the Civil Aeronautics Board's able, fluent L. WELCH POGUE, we're able to bring you what we consider just about the clearest statement yet on what all the "freedom of the air" shouting is about. Altogether, it's been a pretty baffling subject to the layman, and so befogged with political angles that few have been able to form clear views on it. CHAIRMAN POGUE'S article should help every AIR TRANSPORTATION reader mightily in that direction.

Finally, we're rather proud that once again, with this issue, we've set a new high in acceptance by advertisers—people with real messages for the shipper-by-air and the future shipper-by-air.

* * *

But none of these things, honestly, makes us half as proud as the constant flow of encouragement which continues pouring in from readers. There's proof of it aplenty in the rising numbers of subscriptions that are coming in, as well as in the many letters that discuss the job we are trying to do, offer suggestions to aid us in doing it better, sometimes fire brickbats at us for not doing it quite well enough.

So—though this is no anniversary—we say to every reader: Thank you again for the confidence which has enabled us to travel so far so fast. May we, on our part, continue to merit your faith.

Situation Wanted

TRAFFIC MANAGER — ATTORNEY seeks permanent position in the Air Transport Industry, Legal Department preferred. Have excellent business background including 17 years as general traffic manager for present employer, a large, national manufacturer; also last five years as attorney with general practice — Illinois Bar. Familiar with transportation administrative agencies. Progressive, adaptable and believe in the future of Air Commerce. Can furnish excellent references. Age 41, married. **Please address reply to Air Transportation, Box 7, 10 Bridge St., New York, N. Y.**